FIG. 1

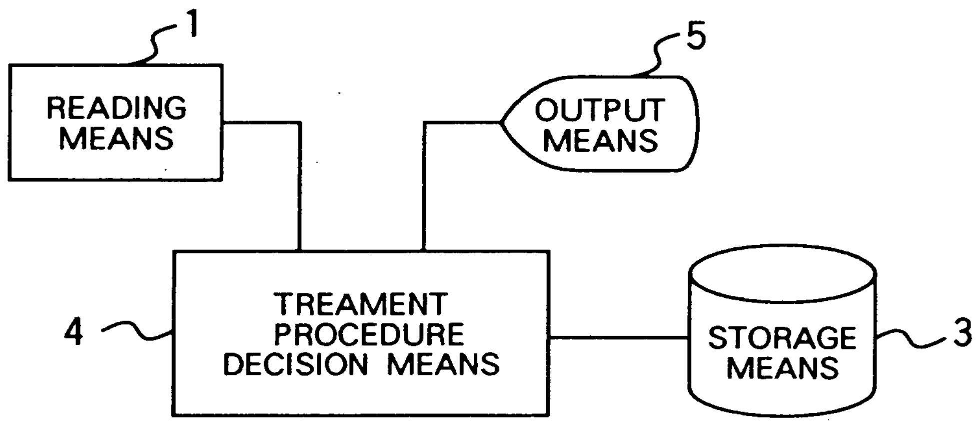


FIG. 2

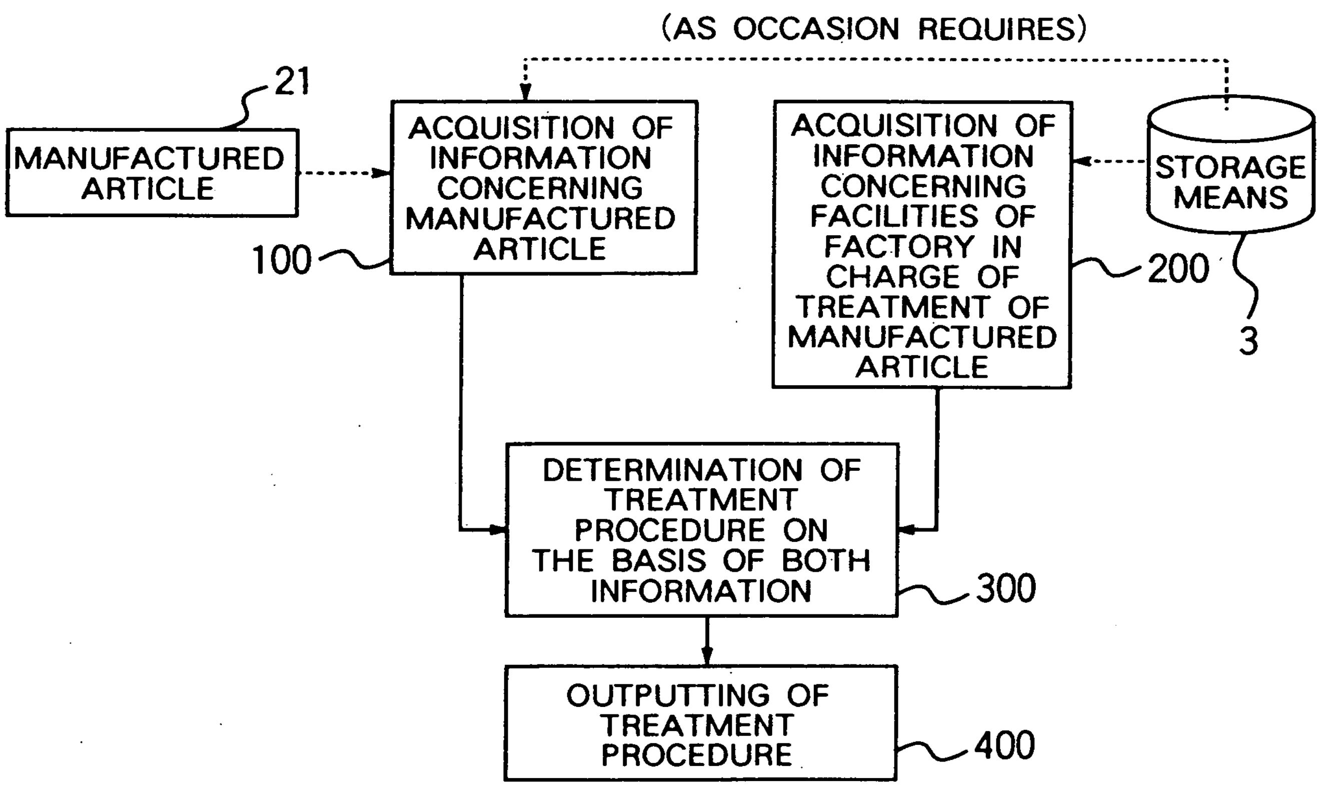


FIG. 3

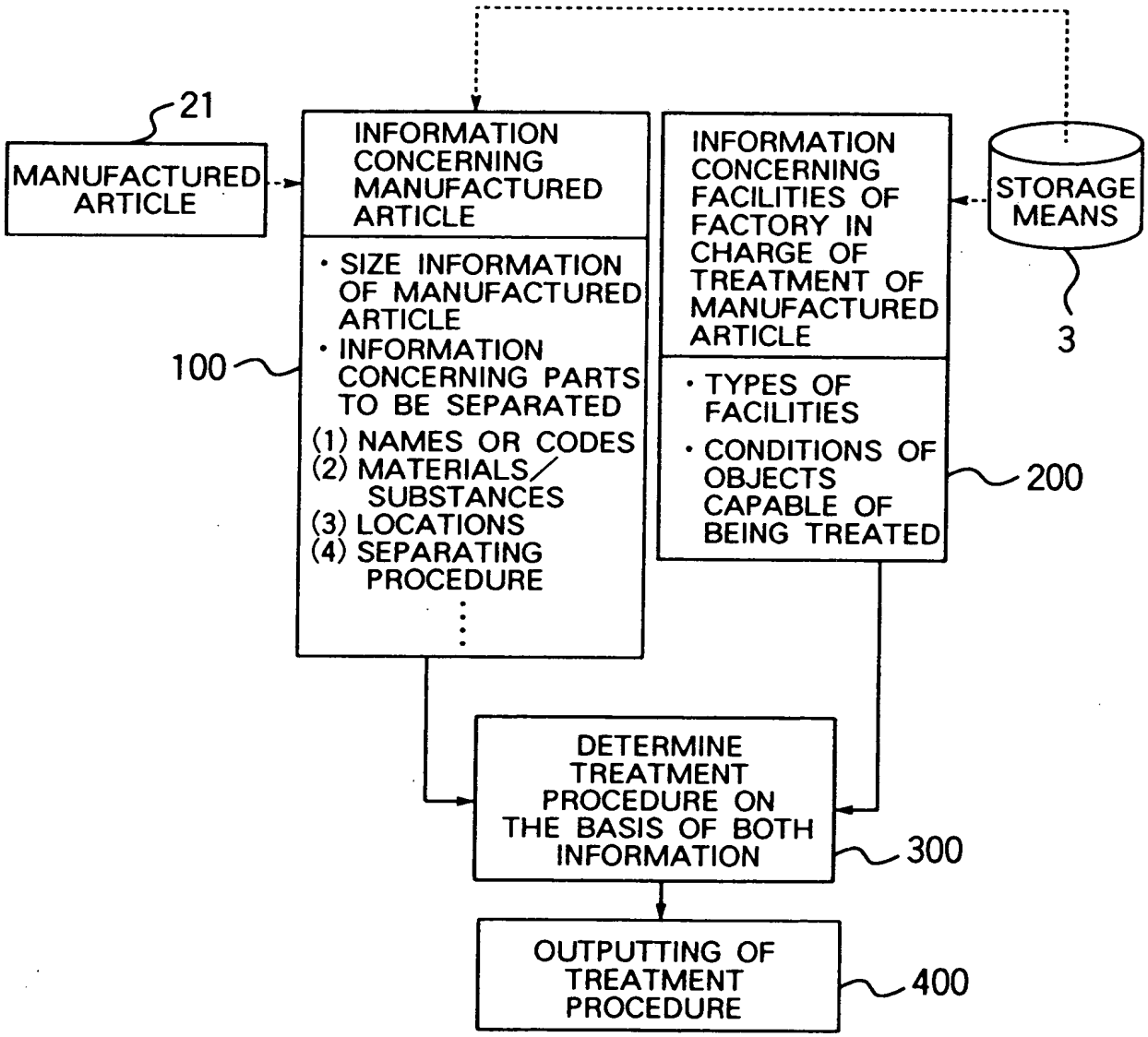

21
MANUFACTURED ARTICLE
INFORMATION CONCERNING MANUFACTURED ARTICLE
• SIZE INFORMATION OF MANUFACTURED ARTICLE
• INFORMATION CONCERNING PARTS TO BE SEPARATED
(1) NAMES OR CODES
(2) MATERIALS/ SUBSTANCES
(3) LOCATIONS
(4) SEPARATING PROCEDURE
100
INFORMATION CONCERNING FACILITIES OF FACTORY IN CHARGE OF TREATMENT OF MANUFACTURED ARTICLE
• TYPES OF FACILITIES
• CONDITIONS OF OBJECTS CAPABLE OF BEING TREATED
200
STORAGE MEANS
3
DETERMINE TREATMENT PROCEDURE ON THE BASIS OF BOTH INFORMATION
300
OUTPUTTING OF TREATMENT PROCEDURE
400

FIG. 4

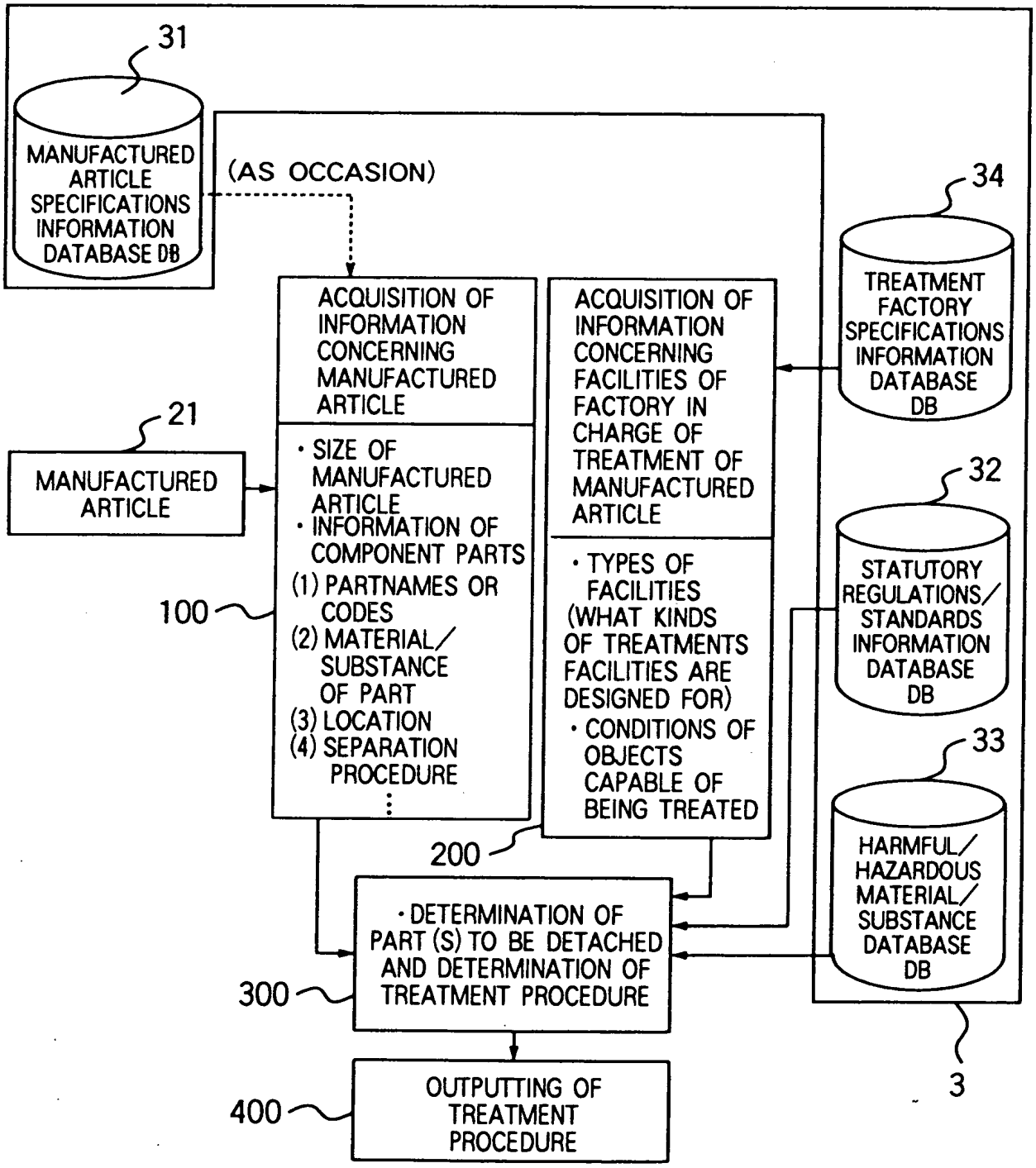

31
MANUFACTURED ARTICLE SPECIFICATIONS INFORMATION DATABASE DB
(AS OCCASION)
34
TREATMENT FACTORY SPECIFICATIONS INFORMATION DATABASE DB
ACQUISITION OF INFORMATION CONCERNING MANUFACTURED ARTICLE
ACQUISITION OF INFORMATION CONCERNING FACILITIES OF FACTORY IN CHARGE OF TREATMENT OF MANUFACTURED ARTICLE
21
MANUFACTURED ARTICLE
• SIZE OF MANUFACTURED ARTICLE
• INFORMATION OF COMPONENT PARTS
(1) PARTNAMES OR CODES
(2) MATERIAL/ SUBSTANCE OF PART
(3) LOCATION
(4) SEPARATION PROCEDURE
32
STATUTORY REGULATIONS/ STANDARDS INFORMATION DATABASE DB
100
• TYPES OF FACILITIES (WHAT KINDS OF TREATMENTS FACILITIES ARE DESIGNED FOR)
• CONDITIONS OF OBJECTS CAPABLE OF BEING TREATED
33
HARMFUL/ HAZARDOUS MATERIAL/ SUBSTANCE DATABASE DB
200
• DETERMINATION OF PART (S) TO BE DETACHED AND DETERMINATION OF TREATMENT PROCEDURE
300
OUTPUTTING OF TREATMENT PROCEDURE
400
3

FIG. 5

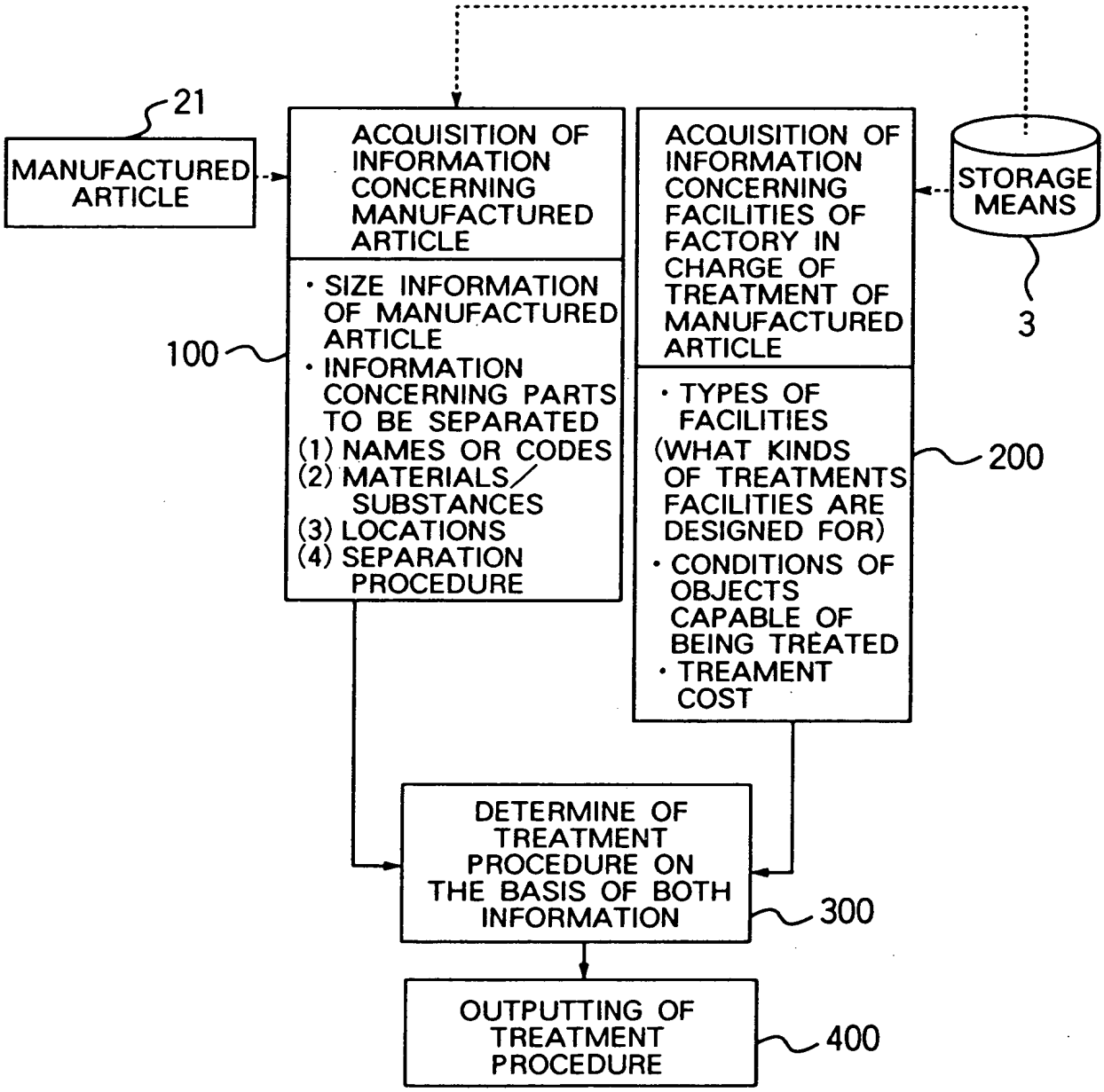

21
MANUFACTURED ARTICLE
ACQUISITION OF INFORMATION CONCERNING MANUFACTURED ARTICLE
• SIZE INFORMATION OF MANUFACTURED ARTICLE
• INFORMATION CONCERNING PARTS TO BE SEPARATED
(1) NAMES OR CODES
(2) MATERIALS/ SUBSTANCES
(3) LOCATIONS
(4) SEPARATION PROCEDURE
100
ACQUISITION OF INFORMATION CONCERNING FACILITIES OF FACTORY IN CHARGE OF TREATMENT OF MANUFACTURED ARTICLE
• TYPES OF FACILITIES (WHAT KINDS OF TREATMENTS FACILITIES ARE DESIGNED FOR)
• CONDITIONS OF OBJECTS CAPABLE OF BEING TREATED
• TREAMENT COST
200
STORAGE MEANS
3
DETERMINE OF TREATMENT PROCEDURE ON THE BASIS OF BOTH INFORMATION
300
OUTPUTTING OF TREATMENT PROCEDURE
400

FIG. 6

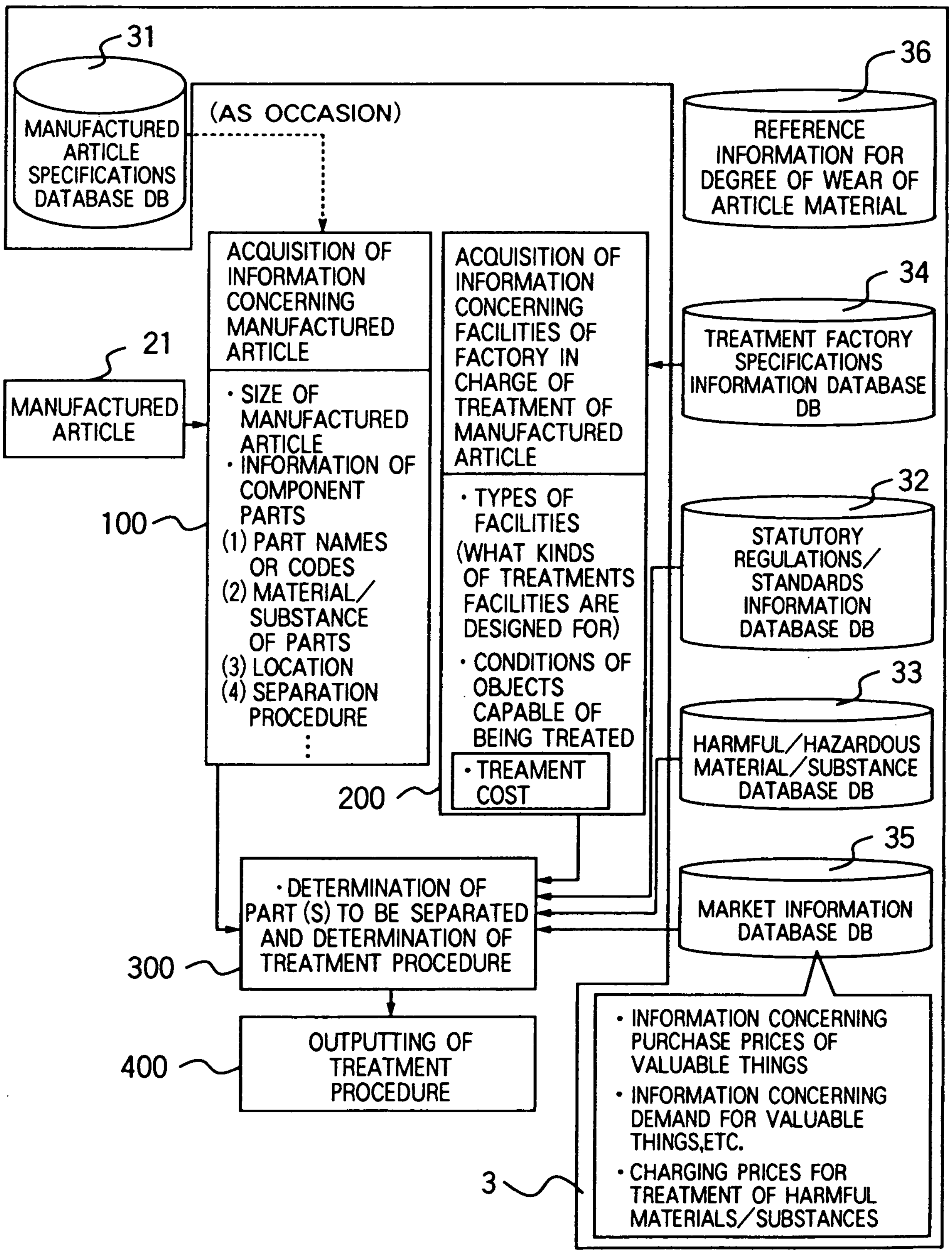

31
MANUFACTURED ARTICLE SPECIFICATIONS DATABASE DB
(AS OCCASION)
36
REFERENCE INFORMATION FOR DEGREE OF WEAR OF ARTICLE MATERIAL
ACQUISITION OF INFORMATION CONCERNING MANUFACTURED ARTICLE
· SIZE OF MANUFACTURED ARTICLE
· INFORMATION OF COMPONENT PARTS
(1) PART NAMES OR CODES
(2) MATERIAL/SUBSTANCE OF PARTS
(3) LOCATION
(4) SEPARATION PROCEDURE
⋮
ACQUISITION OF INFORMATION CONCERNING FACILITIES OF FACTORY IN CHARGE OF TREATMENT OF MANUFACTURED ARTICLE
· TYPES OF FACILITIES
(WHAT KINDS OF TREATMENTS FACILITIES ARE DESIGNED FOR)
· CONDITIONS OF OBJECTS CAPABLE OF BEING TREATED
· TREAMENT COST
34
TREATMENT FACTORY SPECIFICATIONS INFORMATION DATABASE DB
21
MANUFACTURED ARTICLE
100
32
STATUTORY REGULATIONS/STANDARDS INFORMATION DATABASE DB
33
HARMFUL/HAZARDOUS MATERIAL/SUBSTANCE DATABASE DB
200
35
MARKET INFORMATION DATABASE DB
·DETERMINATION OF PART (S) TO BE SEPARATED AND DETERMINATION OF TREATMENT PROCEDURE
300
OUTPUTTING OF TREATMENT PROCEDURE
400
· INFORMATION CONCERNING PURCHASE PRICES OF VALUABLE THINGS
· INFORMATION CONCERNING DEMAND FOR VALUABLE THINGS,ETC.
· CHARGING PRICES FOR TREATMENT OF HARMFUL MATERIALS/SUBSTANCES
3

FIG. 7

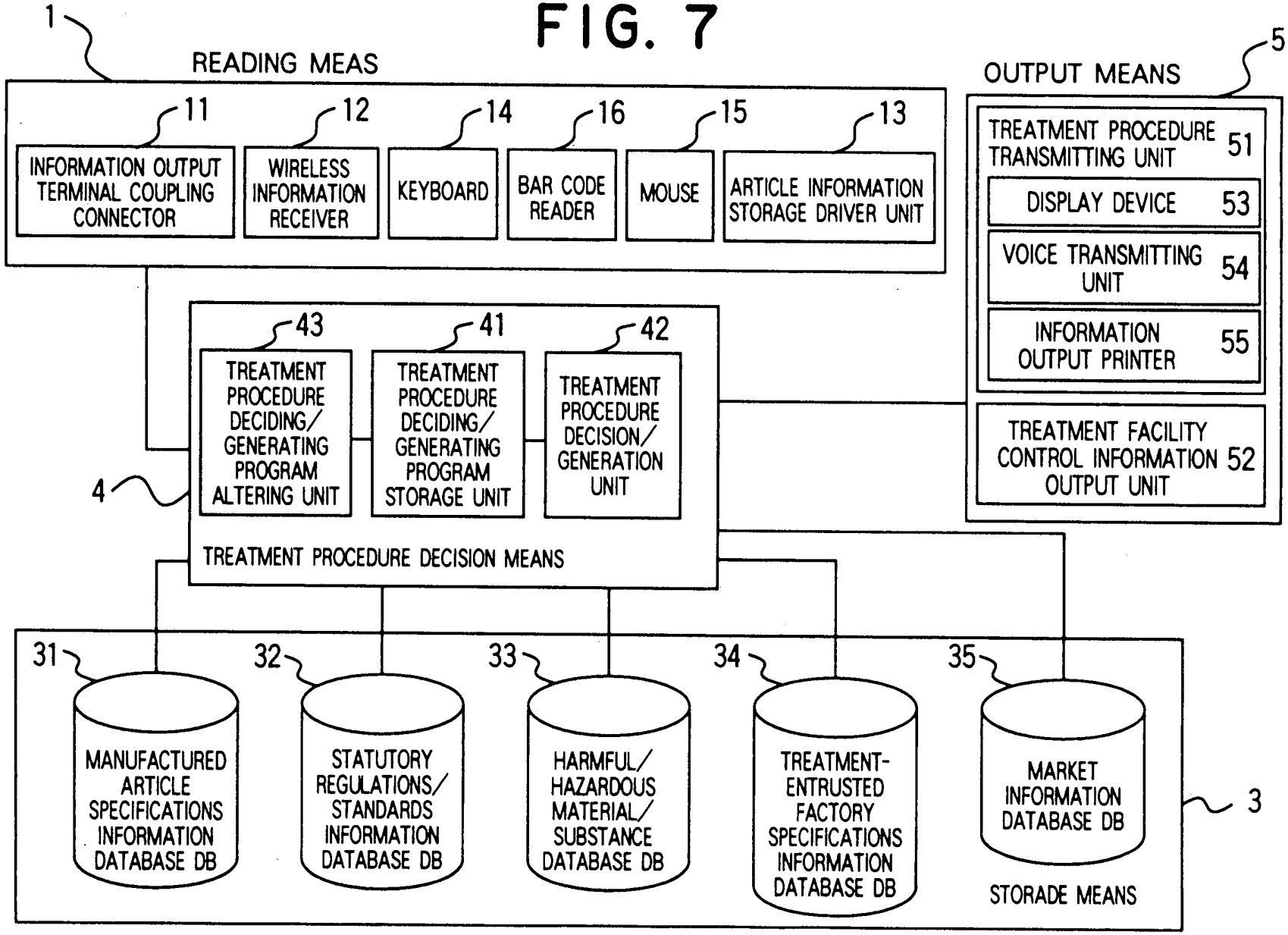


FIG. 8

EXAMPLE OF STATUTORY REGULATIONS/STANDARDS INFOFMATION DATABASE

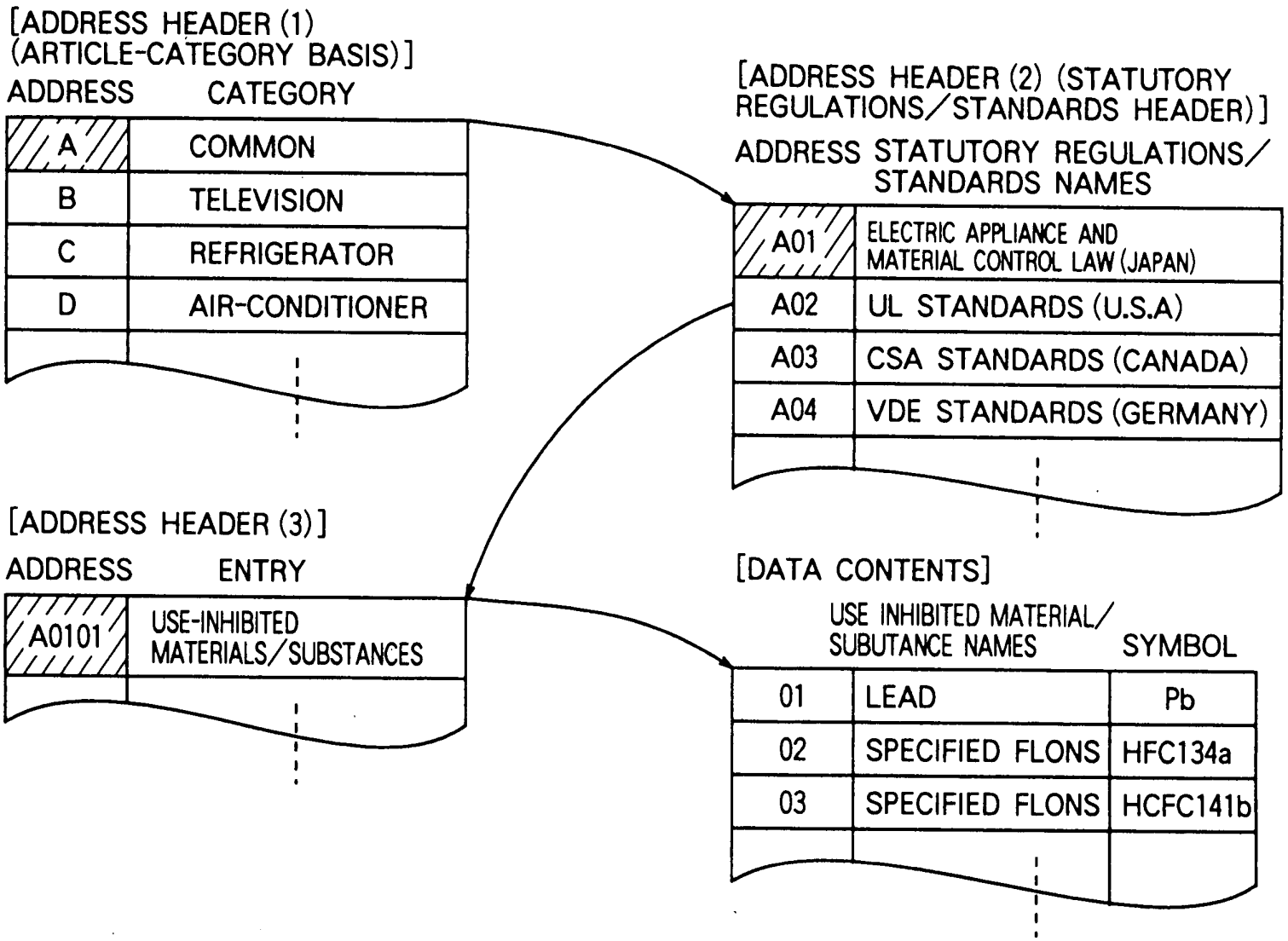


FIG. 9

EXAMPLE OF DATA OF MANUFATURED ARTICLE SPECIFICATIONS INFORMATION

ADDRESS HEADER

ADDRESS	HEADER ENTRY	DATA SIZE
A	BASIC INFORMATION	50
B	DESIGN INFORMATION (1)	50
C	DESIGN INFORMATION (2) COMPONENT PART INFORMATION	40000
D	DESIGN INFORMATION (3) DISASSEMBLING METHOD INFORMATION	1000
E	⋮	

DATA FIELD

A

ARTICLE CATEGORY	MANUFACTURER NAME	MODEL NAME	MANUFACTURE ID NUMBER	MANUFACTURE DATE	RECYCLE-ALLOWABLE LIFE LIMIT
CTV	HITACHI	C29ABC	000205	198902	3

B

SCREEN SIZE	OUTER DIMENSIONS (W)	OUTER DIMENSIONS (H)	OUTER DIMENSIONS (D)	WEIGHT	DISSIPATION POWER
29	500	500	450	40.0	120

C

PART NUMBER	PART NAME	MATERIAL/SUBSTANCE: CATEGORY	MATERIAL/SUBSTANCE: MATERIALS/SUBSTANCES NAME	MATERIAL/PART MANUFACTURER	MATERIAL/PART GRADE	WEIGHT	NUMBER	REUSE-DESTINED	USE-HISTORY (YEARS)	PART EXCHANGE DATE	
1	BEZEL	P	PS	ABC	PS10	2000	1	0	0	0000	----
2	COVER	P	PS	ABC	PS30	3000	1	0	0	0000	----
3	PWB ASSY	PWB	Pb+Cu+e.t.c	—	A55	3500	1	0	0	0000	----
4	HOLDER	P	PS	DEF	B60	200	1	0	0	0000	----
5	CRT	CO	Pb+Glass	HIT	C29A	20000	1	1	0	0000	----
6	DY	CO	PPE+Cu	HM	DY29	600	1	1	0	9205	----
7	CABLE	CO	PVC+Cu	HD	CA100	300	10	0	3	0000	----
8	SPEAKER	CO	—	NC	SP10	1000	2	1	0	0000	----
9	S.METAL	M	Fe	NS	SECC	400	-2	1	0	0000	----

⋮

FIG. 10

EXAMPLE OF MARKET INFOFMATION DATABASE

[ADDRESS HEADER (1)]

ADDRESS	ENTRY
A	MARKET PRICE INFORMATION OF USED-ARTICLES
B	DEMAND INFORMATION OF USED-PARTS
⋮	⋮

[ADDRESS HEADER (2) (ARTICLE-CATEGORY BASED)]

A01	COLOR TELEVISION
A02	REFRIGERATOR
A03	AIR-CONDITIONER
⋮	⋮

[USED-ARTICLE MARKET PRICE INFORMATION DATA]

	ARTICLE MODEL NAME	MANUFACTURE YEAR	STANDARD MARKET PRICE
01	C29ABC1	90	3000
02	C29ABC1	91	5000
03	C25DEF2	90	2000
⋮	⋮	⋮	⋮

[ADDRESS HEADER (2) (ARTICLE-CATEGORY BASED)]

B01	COLOR TELEVISION
B02	REFRIGERATOR
⋮	⋮

[DATA OF USED-PART DEMAND INFORMATION]

PART TYPE	PART CATEGORY	MANUFACTURE YEAR	DEMANDED NUMBER	PURCHASE PRICE	BUYER
DY100	DEFLECTING YOKE	90	10	300	SERVICE CENTER A
CRTC29F	CRT	91	3	3000	SERVICE CENTER B
⋮	⋮	⋮	⋮	⋮	⋮

FIG. 11

(EXAMPLE OF TREATMENT-ENTRUSTED FACTORY SPECIFICATIONS INFORMATION)

[FACTORY NAME : FACTORY A]
(ADDRESS HEADER)
ADDRESS

A	FACILITIES INFORMATION	
B	TREATMENT WORK COST INFORMATION	
C		

(A : FACILITIES INFORMATION)

1.CRUSHER

NO	NAMES	TREATMENT-DESTINED OBJECT	TREATABLE OBJECT SIZE	TREATMENT COSTS	
1	ORDINARY SHREDDER	EXCLUSIVE OF HARMFUL/ HAZARDOUS MATERIALS/ SUBSTANCES AND METAL BLOCKS	300×300×300 (mm)	100 YEN/MIN	
2	SHREDDER FOR METAL BLOCKS	METAL BLOCKS	300×300×300 (mm)	200 YEN/MIN	

2.CUTTER

NO	NAMES	TREATMENT-DESTINED OBJECT	TREATABLE OBJECT SIZE	TREATMENT COSTS	
1	CUTTER	EXCLUSIVE OF HARMFUL/ HAZARDOUS MATERIALS/ SUBSTANCES AND METAL BLOCKS	1000×1000×1000 (mm)	50 YEN/MIN	

(B : TREATMENT WORK COST)

1.DETACHMENT OF SCREW

NO	TYPES (NAMES)	COST	
1	M3×10	3YEN	
2	M3×16	4YEN	

2.LIFTING (↑)

NO	WEIGHT	MAXIMUM LENGTH	COST	
1	~1Kg	~500mm	2YEN	

○.CUTTER

NO	CUT SURFACE DIMENSION	COST	
1	~10000cm^2	2YEN	
2	~20000cm2	5YEN	

○.DETACHING OF SNAP-FIT ⊕ LIFTING (↑S)

NO	—	COST	
1	PER LOCATION	5yen	

FIG. 12

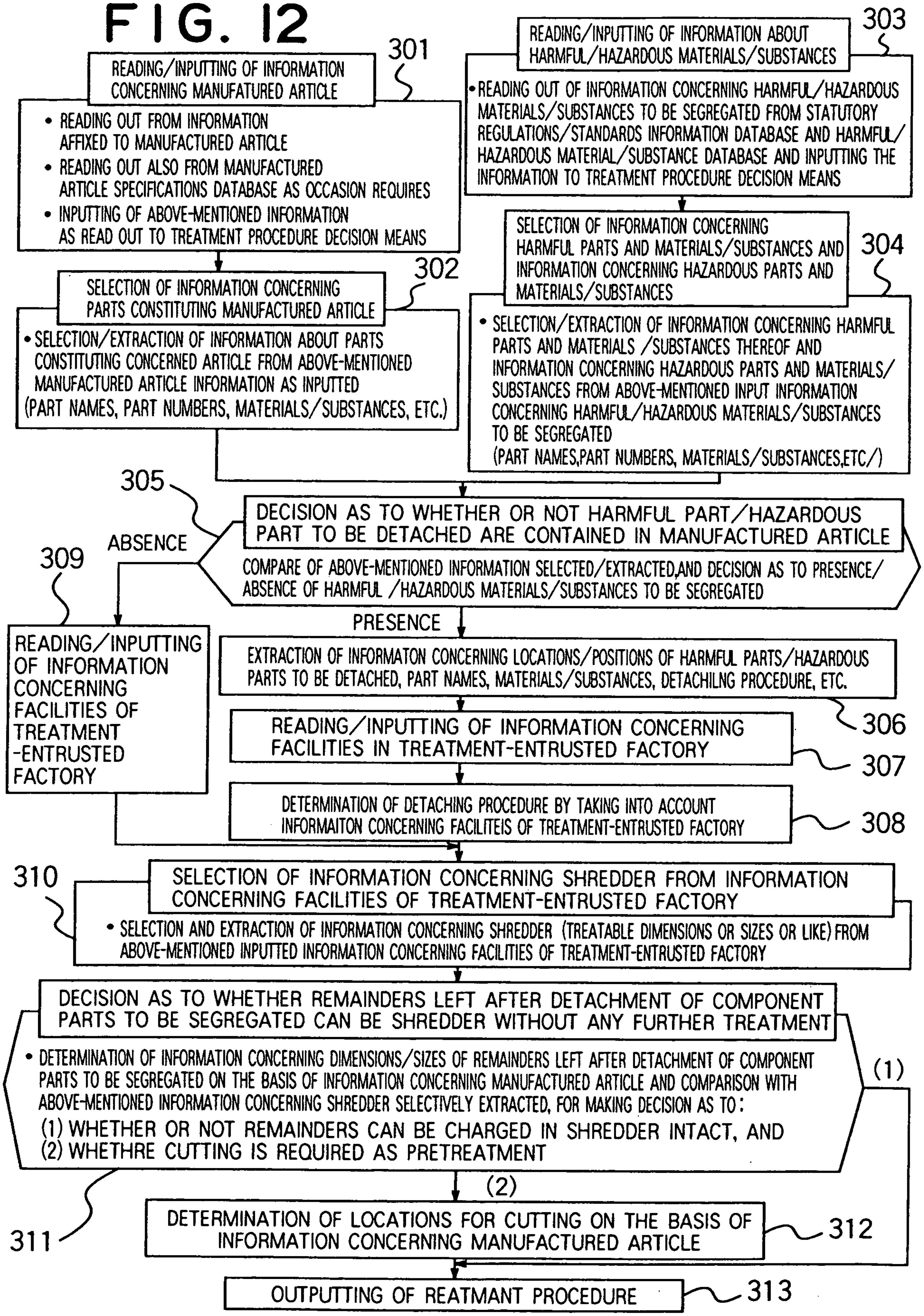

READING/INPUTTING OF INFORMATION CONCERNING MANUFATURED ARTICLE
301
• READING OUT FROM INFORMATION AFFIXED TO MANUFACTURED ARTICLE
• READING OUT ALSO FROM MANUFACTURED ARTICLE SPECIFICATIONS DATABASE AS OCCASION REQUIRES
• INPUTTING OF ABOVE-MENTIONED INFORMATION AS READ OUT TO TREATMENT PROCEDURE DECISION MEANS
SELECTION OF INFORMATION CONCERNING PARTS CONSTITUTING MANUFACTURED ARTICLE
302
• SELECTION/EXTRACTION OF INFORMATION ABOUT PARTS CONSTITUTING CONCERNED ARTICLE FROM ABOVE-MENTIONED MANUFACTURED ARTICLE INFORMATION AS INPUTTED (PART NAMES, PART NUMBERS, MATERIALS/SUBSTANCES, ETC.)
READING/INPUTTING OF INFORMATION ABOUT HARMFUL/HAZARDOUS MATERIALS/SUBSTANCES
303
• READING OUT OF INFORMATION CONCERNING HARMFUL/HAZARDOUS MATERIALS/SUBSTANCES TO BE SEGREGATED FROM STATUTORY REGULATIONS/STANDARDS INFORMATION DATABASE AND HARMFUL/HAZARDOUS MATERIAL/SUBSTANCE DATABASE AND INPUTTING THE INFORMATION TO TREATMENT PROCEDURE DECISION MEANS
SELECTION OF INFORMATION CONCERNING HARMFUL PARTS AND MATERIALS/SUBSTANCES AND INFORMATION CONCERNING HAZARDOUS PARTS AND MATERIALS/SUBSTANCES
304
• SELECTION/EXTRACTION OF INFORMATION CONCERNING HARMFUL PARTS AND MATERIALS /SUBSTANCES THEREOF AND INFORMATION CONCERNING HAZARDOUS PARTS AND MATERIALS/SUBSTANCES FROM ABOVE-MENTIONED INPUT INFORMATION CONCERNING HARMFUL/HAZARDOUS MATERIALS/SUBSTANCES TO BE SEGREGATED (PART NAMES,PART NUMBERS, MATERIALS/SUBSTANCES,ETC/)
305
DECISION AS TO WHETHER OR NOT HARMFUL PART/HAZARDOUS PART TO BE DETACHED ARE CONTAINED IN MANUFACTURED ARTICLE
COMPARE OF ABOVE-MENTIONED INFORMATION SELECTED/EXTRACTED,AND DECISION AS TO PRESENCE/ABSENCE OF HARMFUL /HAZARDOUS MATERIALS/SUBSTANCES TO BE SEGREGATED
ABSENCE
309
READING/INPUTTING OF INFORMATION CONCERNING FACILITIES OF TREATMENT -ENTRUSTED FACTORY
PRESENCE
EXTRACTION OF INFORMATON CONCERNING LOCATIONS/POSITIONS OF HARMFUL PARTS/HAZARDOUS PARTS TO BE DETACHED, PART NAMES, MATERIALS/SUBSTANCES, DETACHILNG PROCEDURE, ETC.
306
READING/INPUTTING OF INFORMATION CONCERNING FACILITIES IN TREATMENT-ENTRUSTED FACTORY
307
DETERMINATION OF DETACHING PROCEDURE BY TAKING INTO ACCOUNT INFORMAITON CONCERNING FACILITEIS OF TREATMENT-ENTRUSTED FACTORY
308
310
SELECTION OF INFORMATION CONCERNING SHREDDER FROM INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY
• SELECTION AND EXTRACTION OF INFORMATION CONCERNING SHREDDER (TREATABLE DIMENSIONS OR SIZES OR LIKE) FROM ABOVE-MENTIONED INPUTTED INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY
DECISION AS TO WHETHER REMAINDERS LEFT AFTER DETACHMENT OF COMPONENT PARTS TO BE SEGREGATED CAN BE SHREDDER WITHOUT ANY FURTHER TREATMENT
• DETERMINATION OF INFORMATION CONCERNING DIMENSIONS/SIZES OF REMAINDERS LEFT AFTER DETACHMENT OF COMPONENT PARTS TO BE SEGREGATED ON THE BASIS OF INFORMATION CONCERNING MANUFACTURED ARTICLE AND COMPARISON WITH ABOVE-MENTIONED INFORMATION CONCERNING SHREDDER SELECTIVELY EXTRACTED, FOR MAKING DECISION AS TO:
(1) WHETHER OR NOT REMAINDERS CAN BE CHARGED IN SHREDDER INTACT, AND
(2) WHETHRE CUTTING IS REQUIRED AS PRETREATMENT
(1)
(2)
311
DETERMINATION OF LOCATIONS FOR CUTTING ON THE BASIS OF INFORMATION CONCERNING MANUFACTURED ARTICLE
312
OUTPUTTING OF REATMANT PROCEDURE
313

FIG. 13

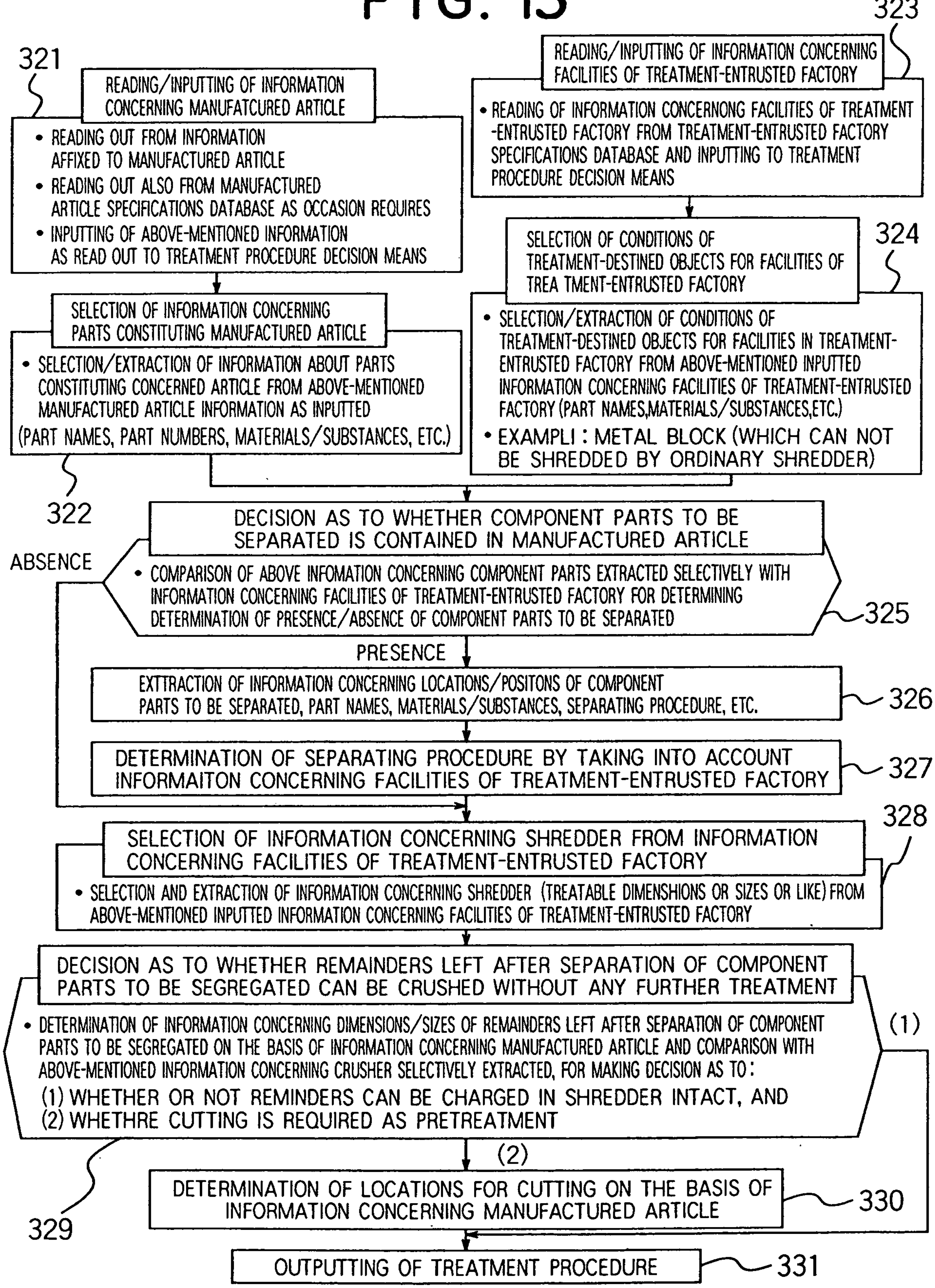

321
READING/INPUTTING OF INFORMATION CONCERNING MANUFATCURED ARTICLE
• READING OUT FROM INFORMATION AFFIXED TO MANUFACTURED ARTICLE
• READING OUT ALSO FROM MANUFACTURED ARTICLE SPECIFICATIONS DATABASE AS OCCASION REQUIRES
• INPUTTING OF ABOVE-MENTIONED INFORMATION AS READ OUT TO TREATMENT PROCEDURE DECISION MEANS
SELECTION OF INFORMATION CONCERNING PARTS CONSTITUTING MANUFACTURED ARTICLE
• SELECTION/EXTRACTION OF INFORMATION ABOUT PARTS CONSTITUTING CONCERNED ARTICLE FROM ABOVE-MENTIONED MANUFACTURED ARTICLE INFORMATION AS INPUTTED
(PART NAMES, PART NUMBERS, MATERIALS/SUBSTANCES, ETC.)
322
323
READING/INPUTTING OF INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY
• READING OF INFORMATION CONCERNONG FACILITIES OF TREATMENT -ENTRUSTED FACTORY FROM TREATMENT-ENTRUSTED FACTORY SPECIFICATIONS DATABASE AND INPUTTING TO TREATMENT PROCEDURE DECISION MEANS
324
SELECTION OF CONDITIONS OF TREATMENT-DESTINED OBJECTS FOR FACILITIES OF TREA TMENT-ENTRUSTED FACTORY
• SELECTION/EXTRACTION OF CONDITIONS OF TREATMENT-DESTINED OBJECTS FOR FACILITIES IN TREATMENT-ENTRUSTED FACTORY FROM ABOVE-MENTIONED INPUTTED INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY (PART NAMES,MATERIALS/SUBSTANCES,ETC.)
• EXAMPLI : METAL BLOCK (WHICH CAN NOT BE SHREDDED BY ORDINARY SHREDDER)
DECISION AS TO WHETHER COMPONENT PARTS TO BE SEPARATED IS CONTAINED IN MANUFACTURED ARTICLE
• COMPARISON OF ABOVE INFOMATION CONCERNING COMPONENT PARTS EXTRACTED SELECTIVELY WITH INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY FOR DETERMINING DETERMINATION OF PRESENCE/ABSENCE OF COMPONENT PARTS TO BE SEPARATED
ABSENCE
325
PRESENCE
EXTTRACTION OF INFORMATION CONCERNING LOCATIONS/POSITONS OF COMPONENT PARTS TO BE SEPARATED, PART NAMES, MATERIALS/SUBSTANCES, SEPARATING PROCEDURE, ETC.
326
DETERMINATION OF SEPARATING PROCEDURE BY TAKING INTO ACCOUNT INFORMAITON CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY
327
SELECTION OF INFORMATION CONCERNING SHREDDER FROM INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY
• SELECTION AND EXTRACTION OF INFORMATION CONCERNING SHREDDER (TREATABLE DIMENSHIONS OR SIZES OR LIKE) FROM ABOVE-MENTIONED INPUTTED INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY
328
DECISION AS TO WHETHER REMAINDERS LEFT AFTER SEPARATION OF COMPONENT PARTS TO BE SEGREGATED CAN BE CRUSHED WITHOUT ANY FURTHER TREATMENT
• DETERMINATION OF INFORMATION CONCERNING DIMENSIONS/SIZES OF REMAINDERS LEFT AFTER SEPARATION OF COMPONENT PARTS TO BE SEGREGATED ON THE BASIS OF INFORMATION CONCERNING MANUFACTURED ARTICLE AND COMPARISON WITH ABOVE-MENTIONED INFORMATION CONCERNING CRUSHER SELECTIVELY EXTRACTED, FOR MAKING DECISION AS TO :
(1) WHETHER OR NOT REMINDERS CAN BE CHARGED IN SHREDDER INTACT, AND
(2) WHETHRE CUTTING IS REQUIRED AS PRETREATMENT
(1)
329
(2)
DETERMINATION OF LOCATIONS FOR CUTTING ON THE BASIS OF INFORMATION CONCERNING MANUFACTURED ARTICLE
330
OUTPUTTING OF TREATMENT PROCEDURE
331

FIG. 14

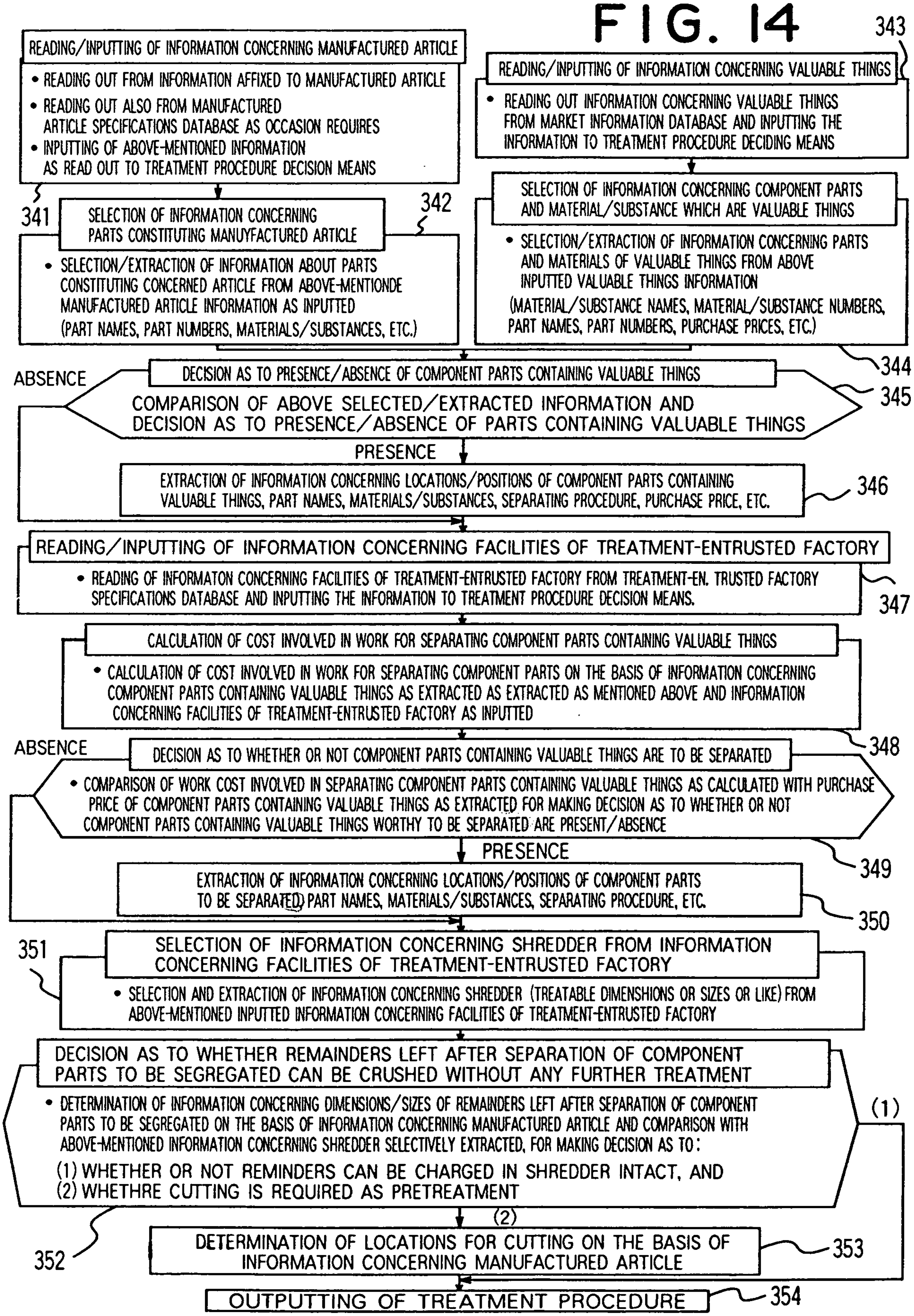

343
READING/INPUTTING OF INFORMATION CONCERNING MANUFACTURED ARTICLE
• READING OUT FROM INFORMATION AFFIXED TO MANUFACTURED ARTICLE
• READING OUT ALSO FROM MANUFACTURED ARTICLE SPECIFICATIONS DATABASE AS OCCASION REQUIRES
• INPUTTING OF ABOVE-MENTIONED INFORMATION AS READ OUT TO TREATMENT PROCEDURE DECISION MEANS
READING/INPUTTING OF INFORMATION CONCERNING VALUABLE THINGS
• READING OUT INFORMATION CONCERNING VALUABLE THINGS FROM MARKET INFORMATION DATABASE AND INPUTTING THE INFORMATION TO TREATMENT PROCEDURE DECIDING MEANS
341
342
SELECTION OF INFORMATION CONCERNING PARTS CONSTITUTING MANUYFACTURED ARTICLE
• SELECTION/EXTRACTION OF INFORMATION ABOUT PARTS CONSTITUTING CONCERNED ARTICLE FROM ABOVE-MENTIONDE MANUFACTURED ARTICLE INFORMATION AS INPUTTED
(PART NAMES, PART NUMBERS, MATERIALS/SUBSTANCES, ETC.)
SELECTION OF INFORMATION CONCERNING COMPONENT PARTS AND MATERIAL/SUBSTANCE WHICH ARE VALUABLE THINGS
• SELECTION/EXTRACTION OF INFORMATION CONCERNING PARTS AND MATERIALS OF VALUABLE THINGS FROM ABOVE INPUTTED VALUABLE THINGS INFORMATION
(MATERIAL/SUBSTANCE NAMES, MATERIAL/SUBSTANCE NUMBERS, PART NAMES, PART NUMBERS, PURCHASE PRICES, ETC.)
344
ABSENCE
DECISION AS TO PRESENCE/ABSENCE OF COMPONENT PARTS CONTAINING VALUABLE THINGS
COMPARISON OF ABOVE SELECTED/EXTRACTED INFORMATION AND DECISION AS TO PRESENCE/ABSENCE OF PARTS CONTAINING VALUABLE THINGS
345
PRESENCE
EXTRACTION OF INFORMATION CONCERNING LOCATIONS/POSITIONS OF COMPONENT PARTS CONTAINING VALUABLE THINGS, PART NAMES, MATERIALS/SUBSTANCES, SEPARATING PROCEDURE, PURCHASE PRICE, ETC.
346
READING/INPUTTING OF INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY
• READING OF INFORMATON CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY FROM TREATMENT-EN. TRUSTED FACTORY SPECIFICATIONS DATABASE AND INPUTTING THE INFORMATION TO TREATMENT PROCEDURE DECISION MEANS.
347
CALCULATION OF COST INVOLVED IN WORK FOR SEPARATING COMPONENT PARTS CONTAINING VALUABLE THINGS
• CALCULATION OF COST INVOLVED IN WORK FOR SEPARATING COMPONENT PARTS ON THE BASIS OF INFORMATION CONCERNING COMPONENT PARTS CONTAINING VALUABLE THINGS AS EXTRACTED AS EXTRACTED AS MENTIONED ABOVE AND INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY AS INPUTTED
348
ABSENCE
DECISION AS TO WHETHER OR NOT COMPONENT PARTS CONTAINING VALUABLE THINGS ARE TO BE SEPARATED
• COMPARISON OF WORK COST INVOLVED IN SEPARATING COMPONENT PARTS CONTAINING VALUABLE THINGS AS CALCULATED WITH PURCHASE PRICE OF COMPONENT PARTS CONTAINING VALUABLE THINGS AS EXTRACTED FOR MAKING DECISION AS TO WHETHER OR NOT COMPONENT PARTS CONTAINING VALUABLE THINGS WORTHY TO BE SEPARATED ARE PRESENT/ABSENCE
PRESENCE
349
EXTRACTION OF INFORMATION CONCERNING LOCATIONS/POSITIONS OF COMPONENT PARTS TO BE SEPARATED, PART NAMES, MATERIALS/SUBSTANCES, SEPARATING PROCEDURE, ETC.
350
351
SELECTION OF INFORMATION CONCERNING SHREDDER FROM INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY
• SELECTION AND EXTRACTION OF INFORMATION CONCERNING SHREDDER (TREATABLE DIMENSHIONS OR SIZES OR LIKE) FROM ABOVE-MENTIONED INPUTTED INFORMATION CONCERNING FACILITIES OF TREATMENT-ENTRUSTED FACTORY
DECISION AS TO WHETHER REMAINDERS LEFT AFTER SEPARATION OF COMPONENT PARTS TO BE SEGREGATED CAN BE CRUSHED WITHOUT ANY FURTHER TREATMENT
• DETERMINATION OF INFORMATION CONCERNING DIMENSIONS/SIZES OF REMAINDERS LEFT AFTER SEPARATION OF COMPONENT PARTS TO BE SEGREGATED ON THE BASIS OF INFORMATION CONCERNING MANUFACTURED ARTICLE AND COMPARISON WITH ABOVE-MENTIONED INFORMATION CONCERNING SHREDDER SELECTIVELY EXTRACTED, FOR MAKING DECISION AS TO:
(1) WHETHER OR NOT REMINDERS CAN BE CHARGED IN SHREDDER INTACT, AND
(2) WHETHRE CUTTING IS REQUIRED AS PRETREATMENT
(1)
(2)
352
DETERMINATION OF LOCATIONS FOR CUTTING ON THE BASIS OF INFORMATION CONCERNING MANUFACTURED ARTICLE
353
OUTPUTTING OF TREATMENT PROCEDURE
354

FIG. 15

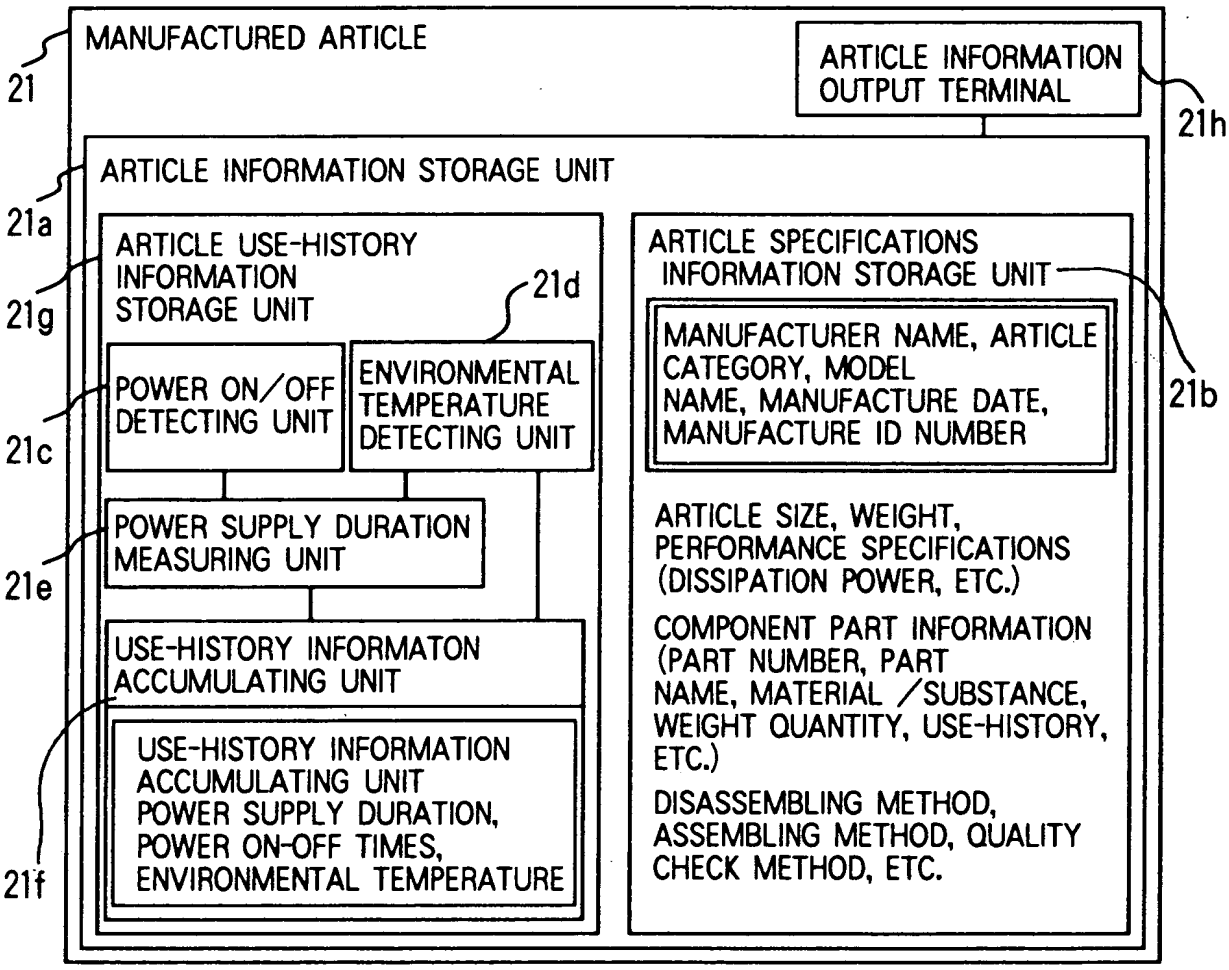


FIG. 16

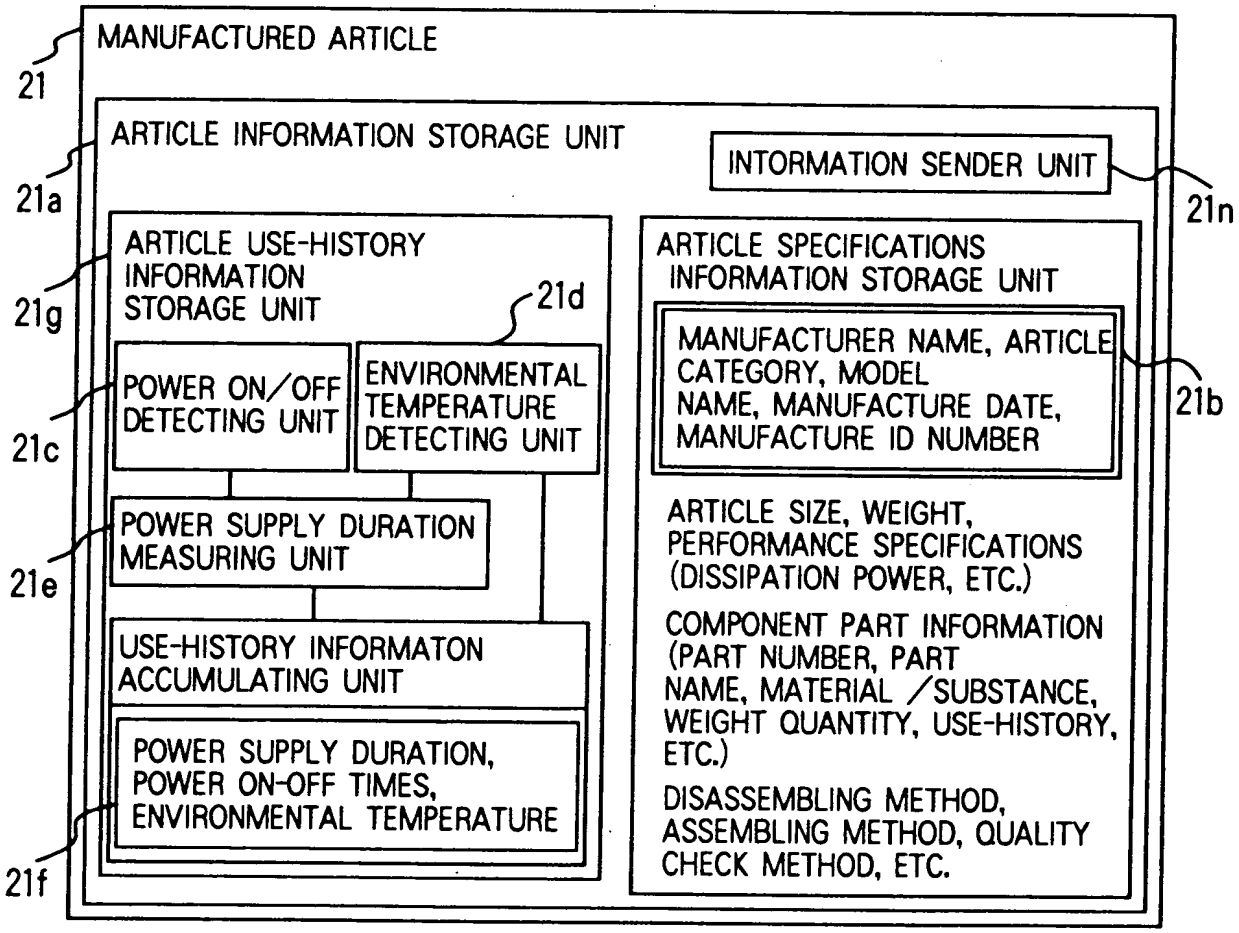

MANUFACTURED ARTICLE
21
ARTICLE INFORMATION STORAGE UNIT
21a
INTORMATION SENDER UNIT
21n
ARTICLE USE-HISTORY INFORMATION STORAGE UNIT
21g
21d
POWER ON/OFF DETECTING UNIT
21c
ENVIRONMENTAL TEMPERATURE DETECTING UNIT
POWER SUPPLY DURATION MEASURING UNIT
21e
USE-HISTORY INFORMATON ACCUMULATING UNIT
POWER SUPPLY DURATION, POWER ON-OFF TIMES, ENVIRONMENTAL TEMPERATURE
21f
ARTICLE SPECIFICATIONS INFORMATION STORAGE UNIT
MANUFACTURER NAME, ARTICLE CATEGORY, MODEL NAME, MANUFACTURE DATE, MANUFACTURE ID NUMBER
21b
ARTICLE SIZE, WEIGHT, PERFORMANCE SPECIFICATIONS (DISSIPATION POWER, ETC.)
COMPONENT PART INFORMATION (PART NUMBER, PART NAME, MATERIAL /SUBSTANCE, WEIGHT QUANTITY, USE-HISTORY, ETC.)
DISASSEMBLING METHOD, ASSEMBLING METHOD, QUALITY CHECK METHOD, ETC.

FIG. 17

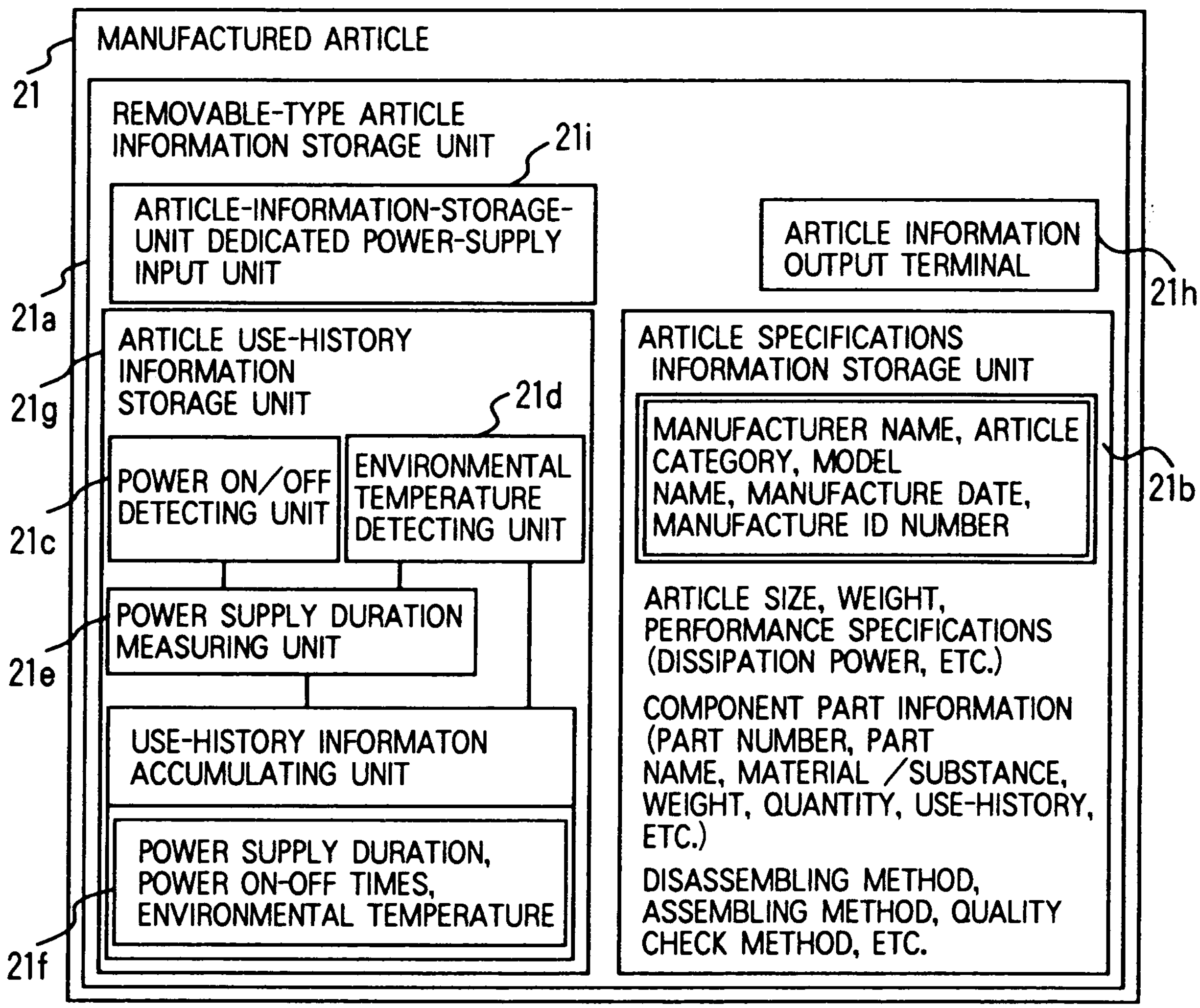
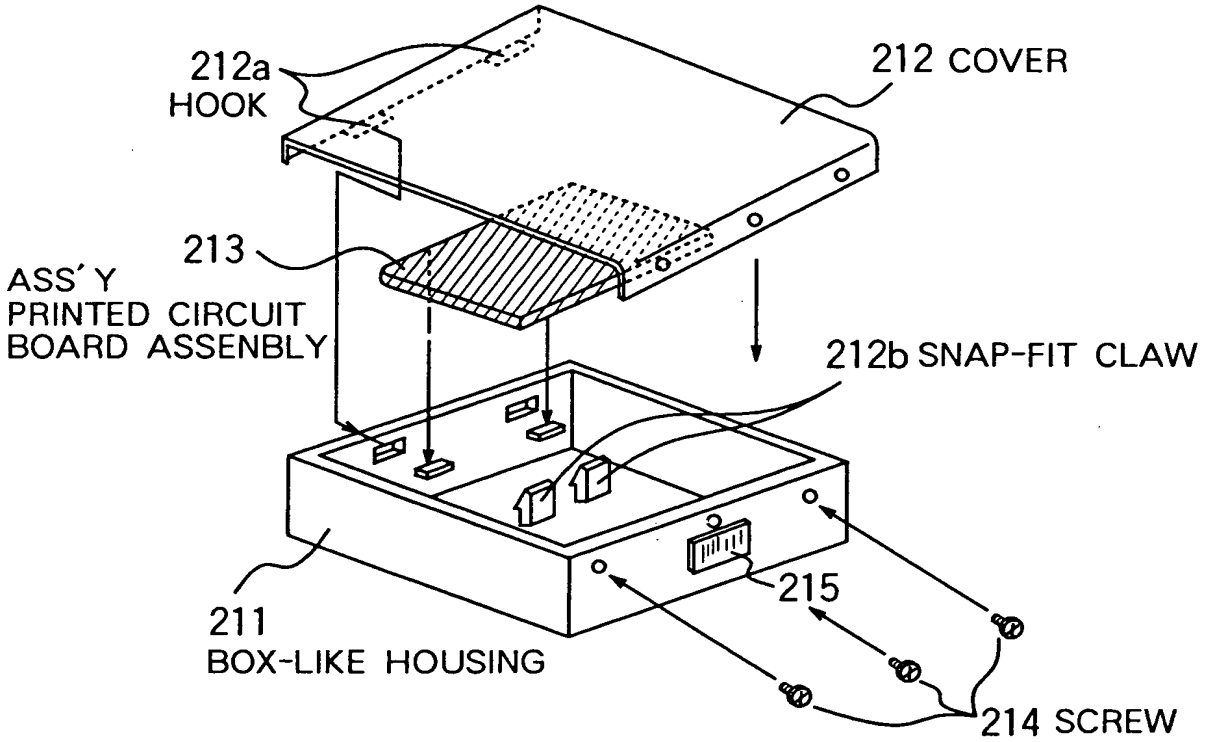

MANUFACTURED ARTICLE
21
REMOVABLE-TYPE ARTICLE INFORMATION STORAGE UNIT
21i
ARTICLE-INFORMATION-STORAGE-UNIT DEDICATED POWER-SUPPLY INPUT UNIT
21a
ARTICLE INFORMATION OUTPUT TERMINAL
21h
ARTICLE USE-HISTORY INFORMATION STORAGE UNIT
21g
21d
POWER ON/OFF DETECTING UNIT
21c
ENVIRONMENTAL TEMPERATURE DETECTING UNIT
POWER SUPPLY DURATION MEASURING UNIT
21e
USE-HISTORY INFORMATON ACCUMULATING UNIT
POWER SUPPLY DURATION, POWER ON-OFF TIMES, ENVIRONMENTAL TEMPERATURE
21f
ARTICLE SPECIFICATIONS INFORMATION STORAGE UNIT
MANUFACTURER NAME, ARTICLE CATEGORY, MODEL NAME, MANUFACTURE DATE, MANUFACTURE ID NUMBER
21b
ARTICLE SIZE, WEIGHT, PERFORMANCE SPECIFICATIONS (DISSIPATION POWER, ETC.)
COMPONENT PART INFORMATION (PART NUMBER, PART NAME, MATERIAL /SUBSTANCE, WEIGHT, QUANTITY, USE-HISTORY, ETC.)
DISASSEMBLING METHOD, ASSEMBLING METHOD, QUALITY CHECK METHOD, ETC.

FIG. 18



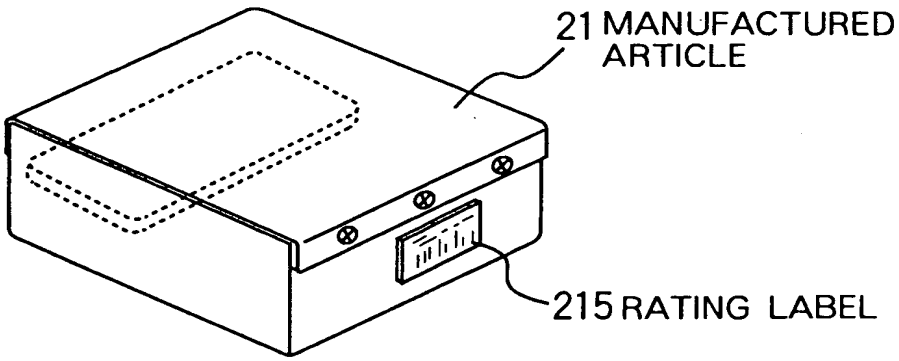


FIG. 19

EXAMPLE OF DATA OF ARTICLE SPECIFICATION INFORMATION

[ADDRESS HEADER]

ADDRESS HEADER ENTRY

A	BASIC INFORMATION
B	DESIGN INFORMATION (1) COMPONENT PART INFORMATION
C	DESIGN INFORMATION (2) SIZE INFORMATION

A: BASIC INFORMATION

ARTICLE CATEGORY	MANUFACTURER NAMES	MODEL NAME	MANUFACTURE ID NUMBER	MANUFACTURE DATE	WEIGHT
PRINTED CIRCUIT BOARD UNIT	HITACHI	A—1	90101	199002	1603g

B: DESIGN INFORMATION (1) COMPONENT PART INFORMATION

NO	PART NAME	PART CODES	MATEREIALS/ SUBSTANCES	MATERIAL-PART MANUFACTURER	MATERIAL GRADE	WEIGHT
1	BOX-LIKE HOUSING	32786	PS	ABC	PS10	1000
2	COVER	21937	Al	CDE	Al100p	200
3	PRINTED CIRCUIT BOARD ASSEMBLY	45789	Pb,Cu,	NC	—	400
4	RATING LABEL	11573	PAPER	SM	HIGH-QUALITY PAPER	1
5	M3X16 SCREW	23578	Fe	TK	Fel	1

C: DESIGN INFORMATION (2) SIZE INFORMATION (STORED AS THREE-DIMENSIONAL CAD DATE)

- ARTICLE SIZE
- PART SIZE
- PART LOCATION SIZE
- WEIGHT
- CUTTING MARGIN POSITION,ETC.

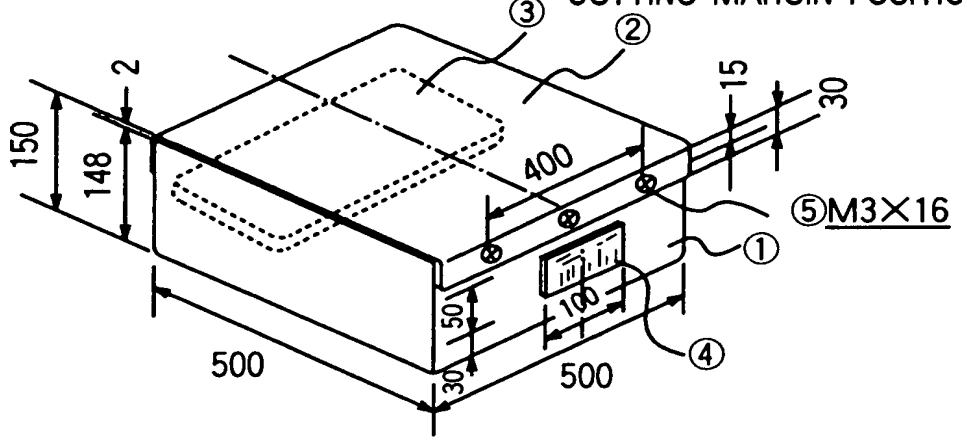
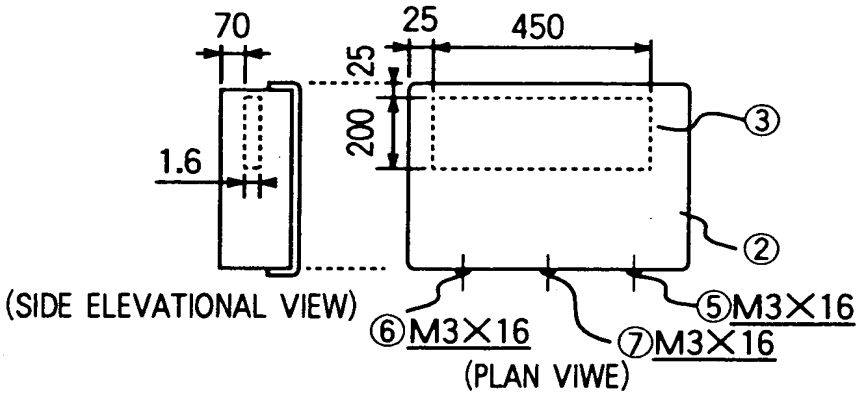


FIG. 20

(CONTINUATION OF C DESIGN INFORMATION (2))



D : DESIGN INFORMATION (3) PART SEPARATION/DISINTEGRATING PROCEDURE

NO	PART NAMES	PART CODES	DETACHING DISINTEGRATING PROCEDURE	
			DISASSEMBLING (WITHOUT DESTROYING ARTICLE)	DISINTEGRATING (ALLOWING DESTRUCTION)
1	BOX-LIKE HOUSING	32786	SCREWS NOS.5,6,7 (⊕CROSS-HEAD SCREW-DRIVER)/COVER↑/PRINTED CIRCUIT BOARD ASSEMBLY↑S	——
2	COVER	21937	SCREWS NOS.5,6,7 (⊕CROSS-HEAD SCREW-DRIVER)/COVER↑	——
3	PRINTED CIRCUIT BOARD ASSEMBLY	45789	SCREWS NOS.5,6,7 (⊕CROSS-HEAD SCREW-DRIVER)/COVER↑/PRINTED CIRCUIT BOARD ASSEMBLY↑SX2	MANUFACTURED ARTICLE (CUTTER/COVER/PRINTED CIRCUIT BOARD ASSEMBLY)

(AVAILABILITY OF MORE DETAILED PROCEDURE INFORMATION)

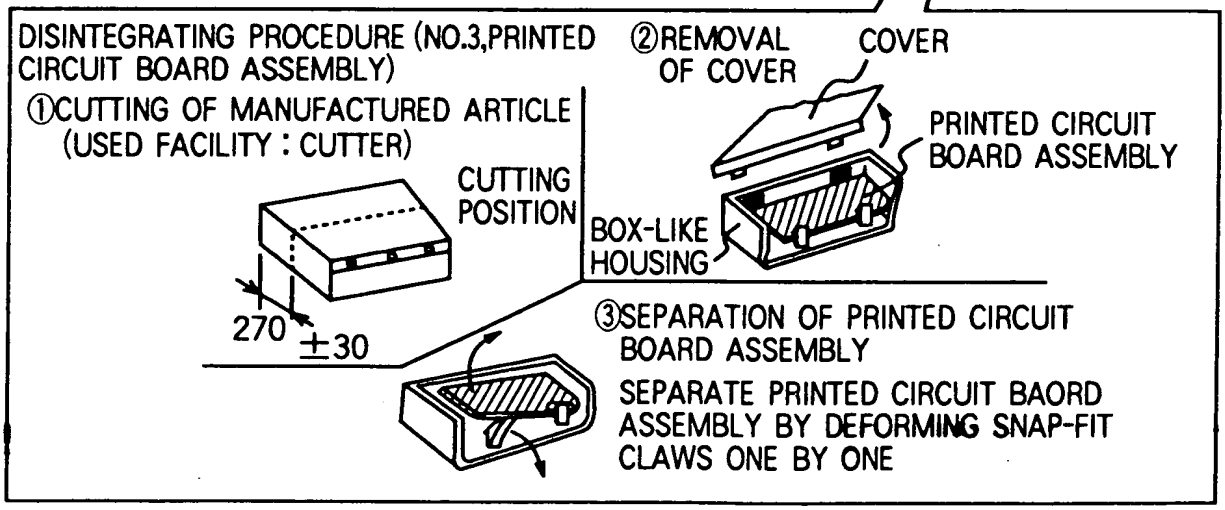


FIG. 21

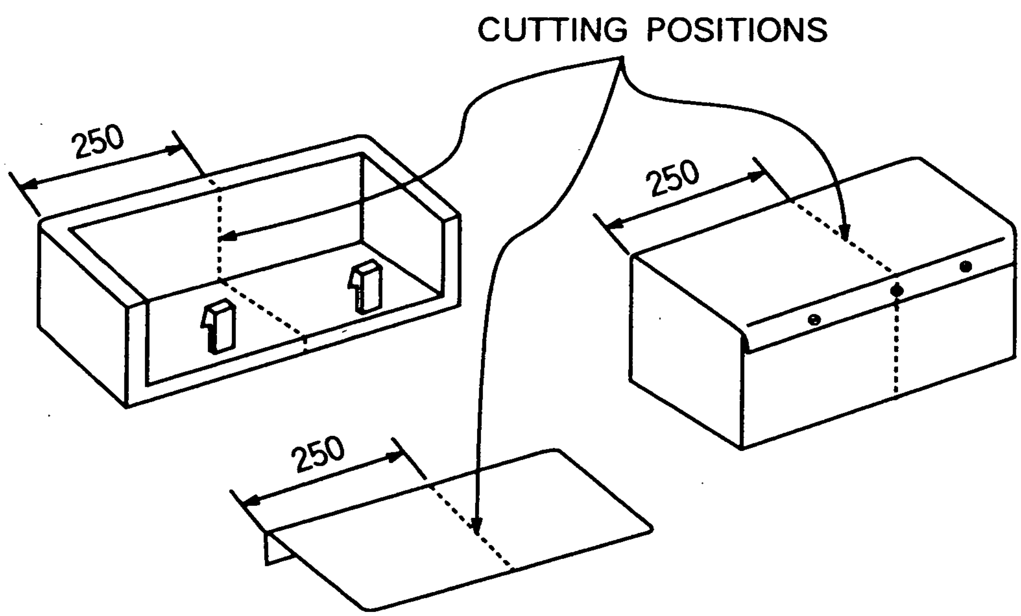


FIG. 22

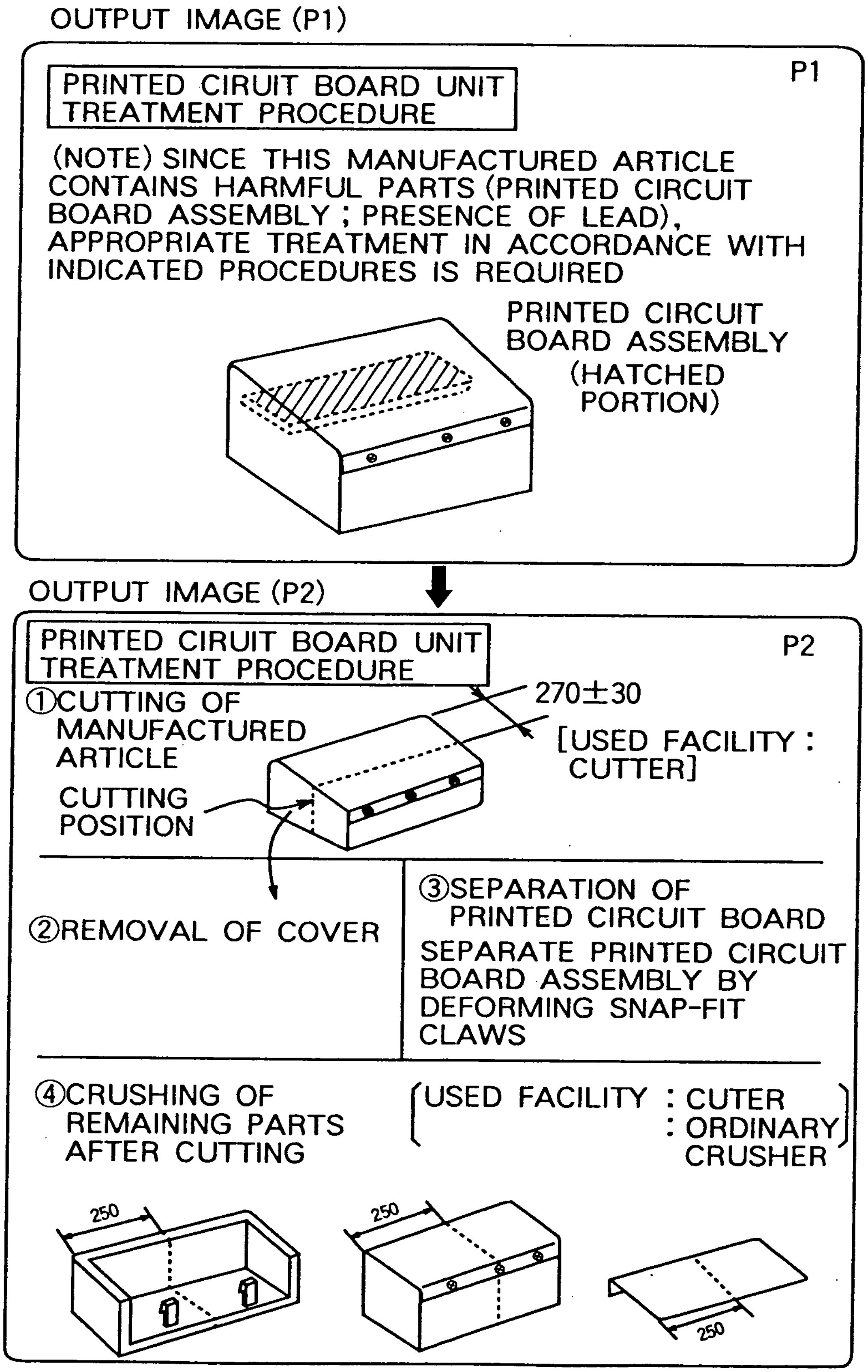

OUTPUT IMAGE (P1)
P1
PRINTED CIRUIT BOARD UNIT TREATMENT PROCEDURE
(NOTE) SINCE THIS MANUFACTURED ARTICLE CONTAINS HARMFUL PARTS (PRINTED CIRCUIT BOARD ASSEMBLY ; PRESENCE OF LEAD), APPROPRIATE TREATMENT IN ACCORDANCE WITH INDICATED PROCEDURES IS REQUIRED
PRINTED CIRCUIT BOARD ASSEMBLY (HATCHED PORTION)
OUTPUT IMAGE (P2)
P2
PRINTED CIRUIT BOARD UNIT TREATMENT PROCEDURE
①CUTTING OF MANUFACTURED ARTICLE
270±30
[USED FACILITY : CUTTER]
CUTTING POSITION
②REMOVAL OF COVER
③SEPARATION OF PRINTED CIRCUIT BOARD
SEPARATE PRINTED CIRCUIT BOARD ASSEMBLY BY DEFORMING SNAP-FIT CLAWS
④CRUSHING OF REMAINING PARTS AFTER CUTTING
(USED FACILITY : CUTER : ORDINARY CRUSHER)
250
250
250

FIG. 23

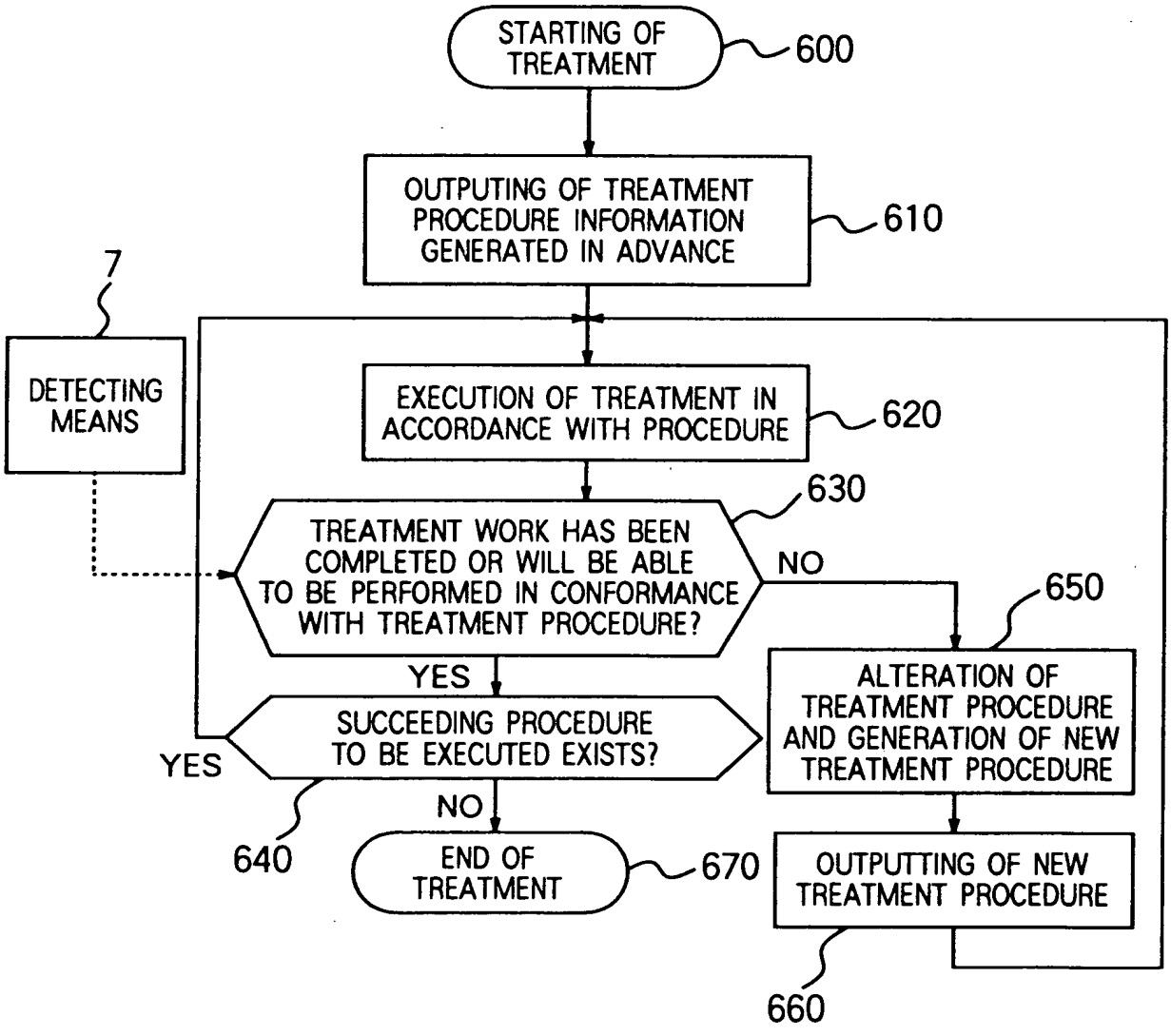

STARTING OF TREATMENT
600
OUTPUTING OF TREATMENT PROCEDURE INFORMATION GENERATED IN ADVANCE
610
7
DETECTING MEANS
EXECUTION OF TREATMENT IN ACCORDANCE WITH PROCEDURE
620
630
TREATMENT WORK HAS BEEN COMPLETED OR WILL BE ABLE TO BE PERFORMED IN CONFORMANCE WITH TREATMENT PROCEDURE?
NO
650
YES
ALTERATION OF TREATMENT PROCEDURE AND GENERATION OF NEW TREATMENT PROCEDURE
SUCCEEDING PROCEDURE TO BE EXECUTED EXISTS?
YES
NO
640
END OF TREATMENT
670
OUTPUTTING OF NEW TREATMENT PROCEDURE
660

FIG. 24

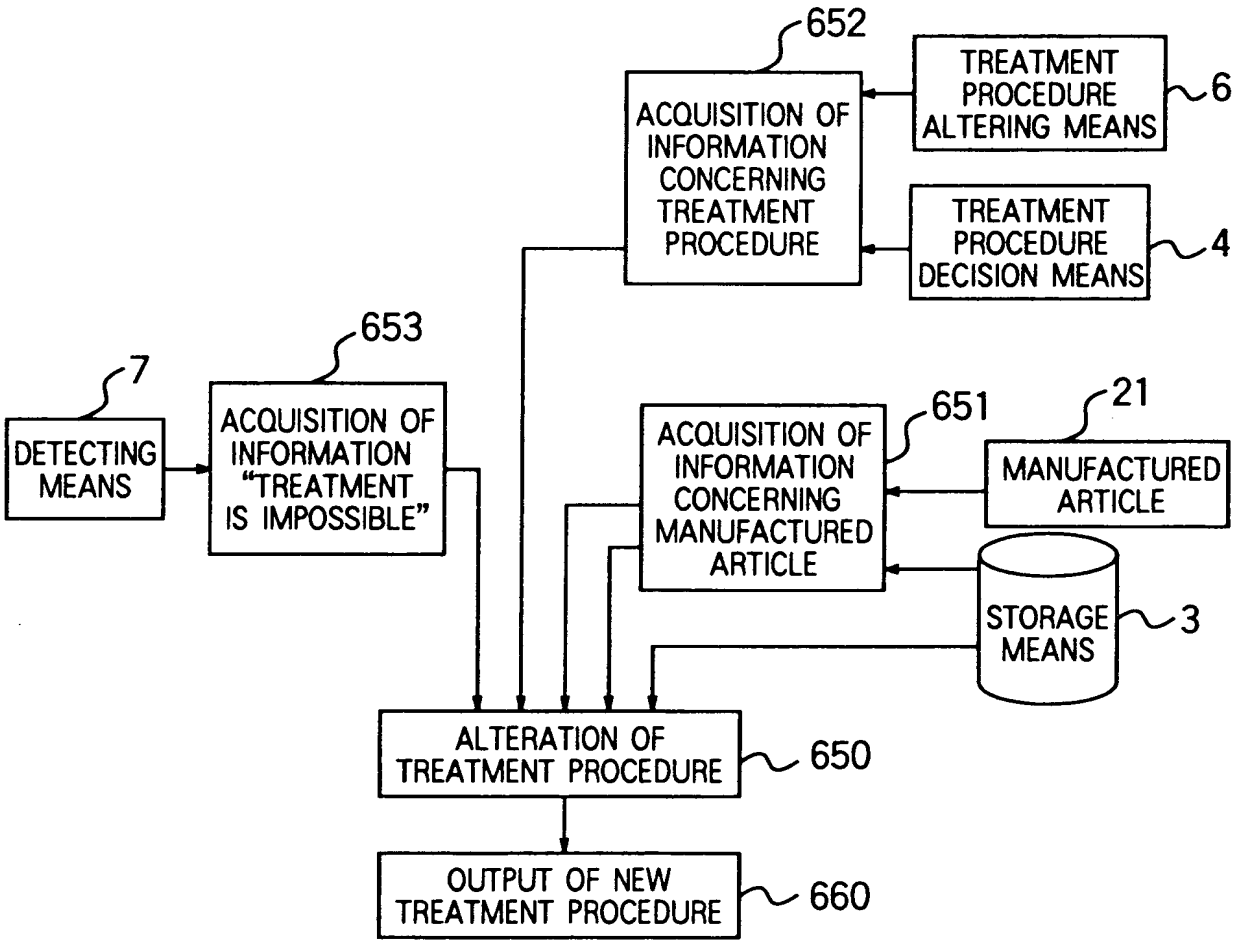

652
TREATMENT PROCEDURE ALTERING MEANS
6
ACQUISITION OF INFORMATION CONCERNING TREATMENT PROCEDURE
TREATMENT PROCEDURE DECISION MEANS
4
653
7
DETECTING MEANS
ACQUISITION OF INFORMATION "TREATMENT IS IMPOSSIBLE"
651
21
ACQUISITION OF INFORMATION CONCERNING MANUFACTURED ARTICLE
MANUFACTURED ARTICLE
STORAGE MEANS
3
ALTERATION OF TREATMENT PROCEDURE
650
OUTPUT OF NEW TREATMENT PROCEDURE
660

FIG. 25

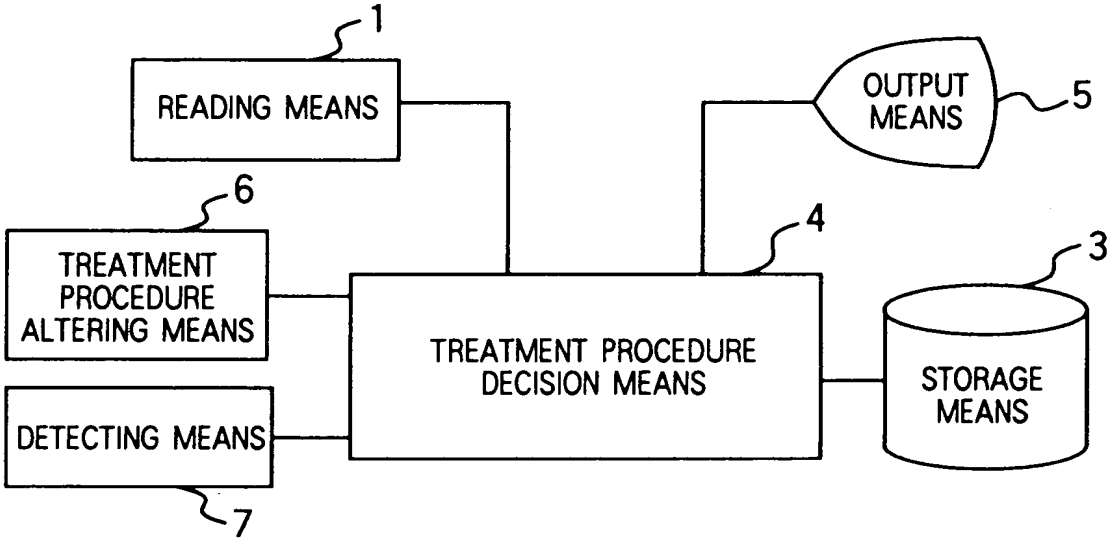


FIG. 26

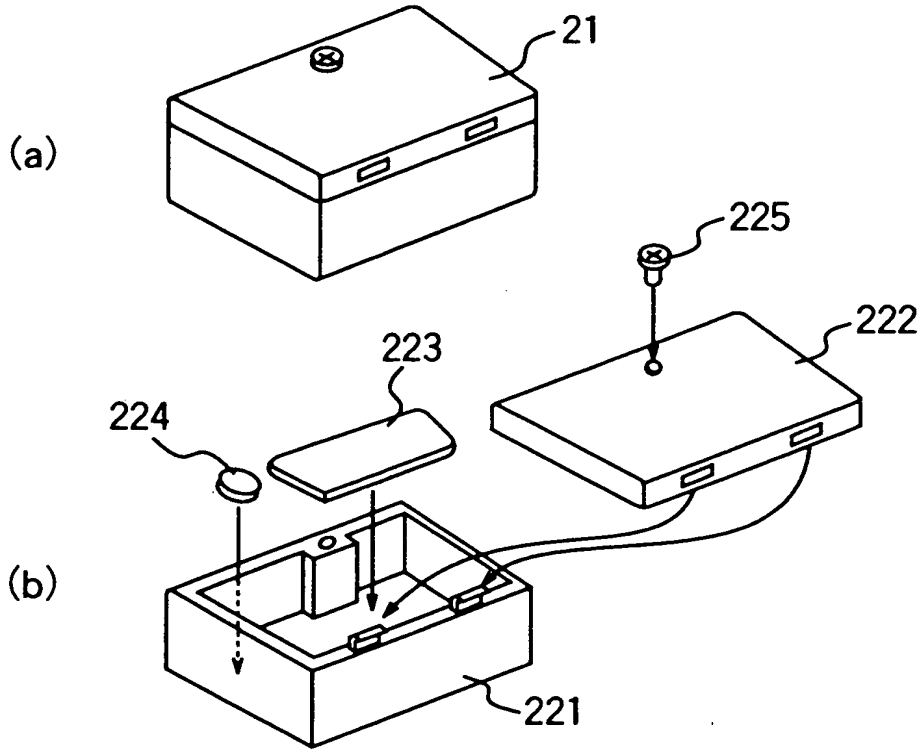
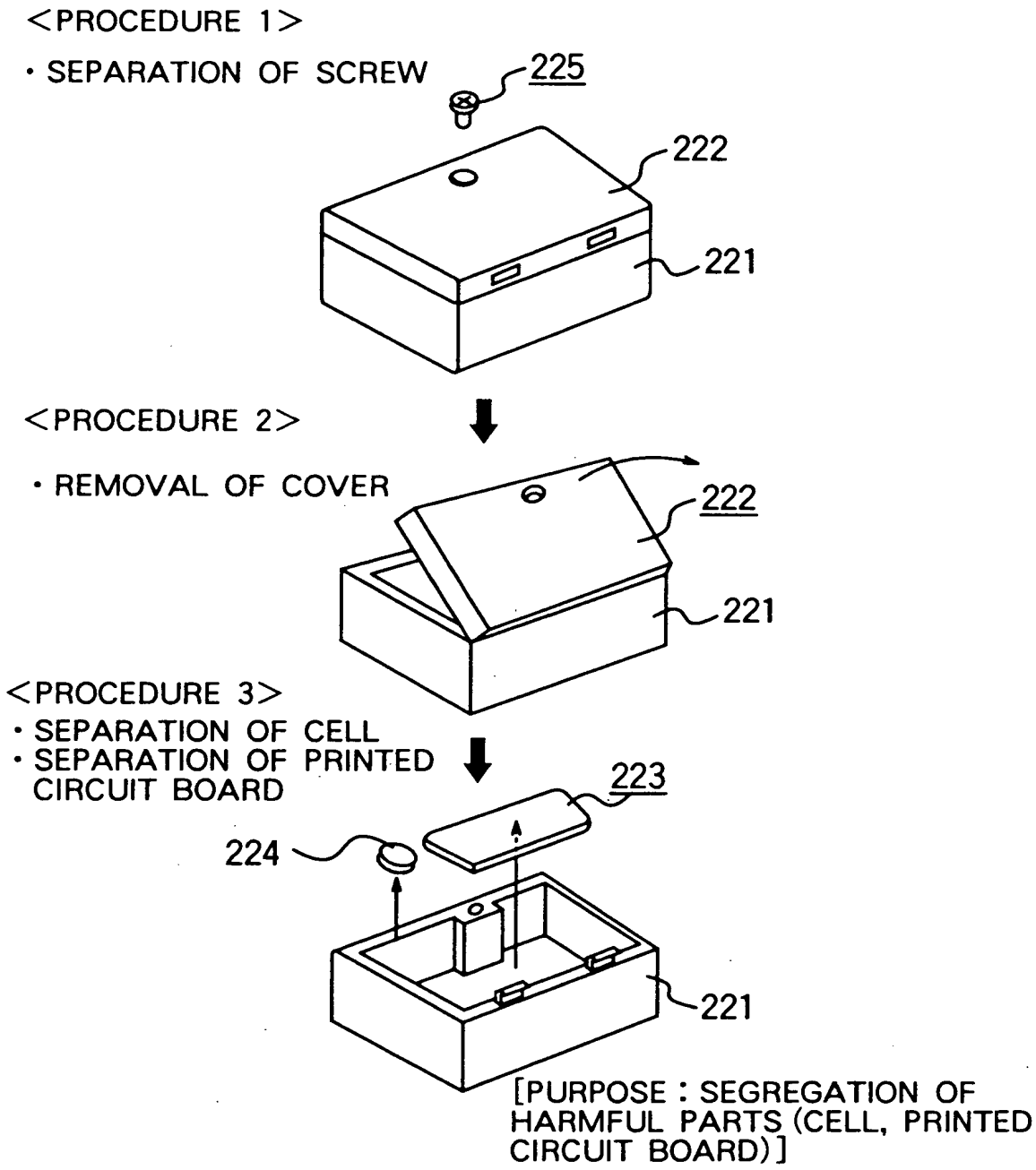


FIG. 27



((EXAMPLE OF TREATMENT PROCEDURE INFORMATION GENERATED PREVIOUSLY BY TREATMEMT PROCEDURE DECISION MEANS 4))

FIG. 28

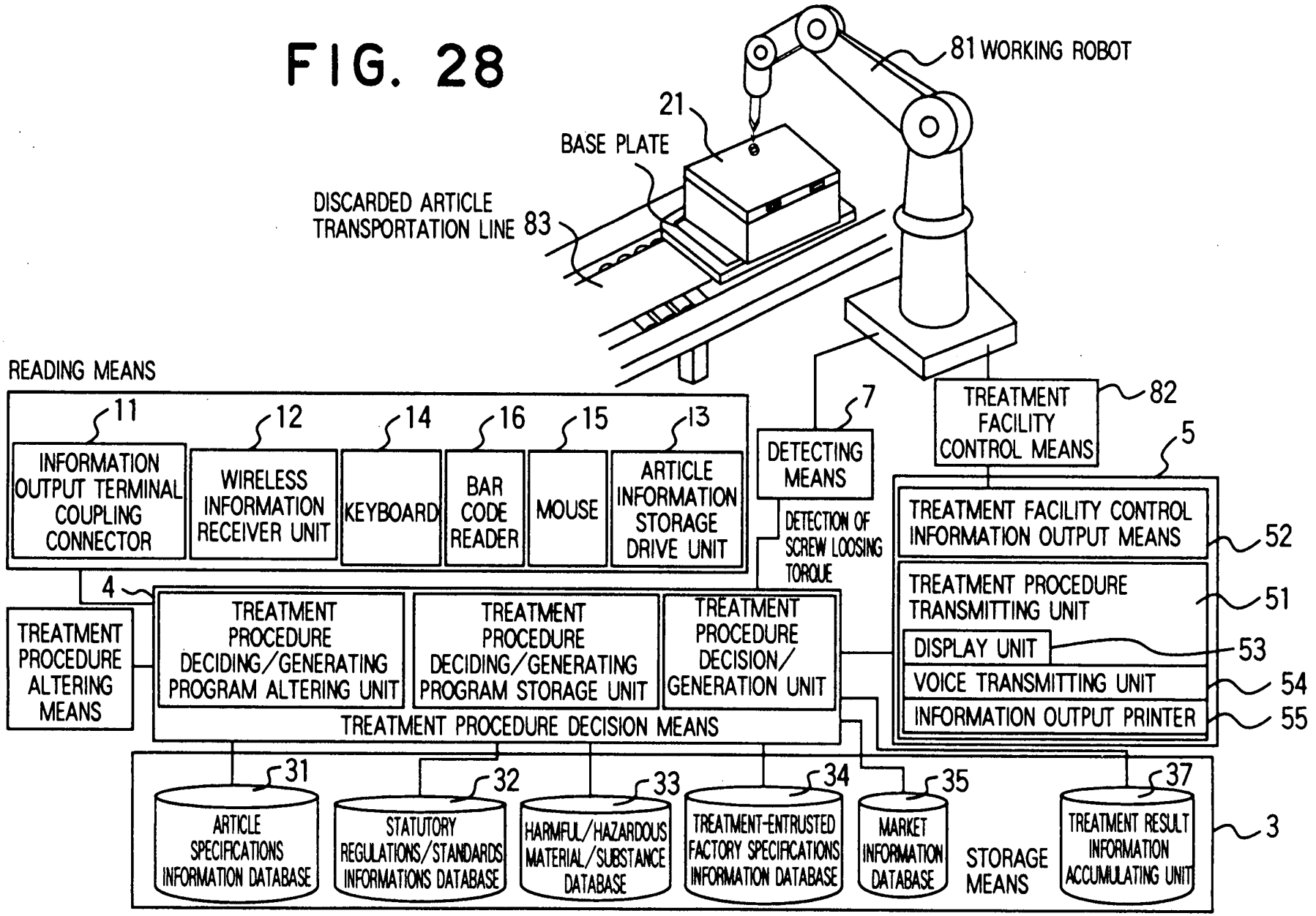

81 WORKING ROBOT
21
BASE PLATE
DISCARDED ARTICLE TRANSPORTATION LINE 83
READING MEANS
11
INFORMATION OUTPUT TERMINAL COUPLING CONNECTOR
12
WIRELESS INFORMATION RECEIVER UNIT
14
KEYBOARD
16
BAR CODE READER
15
MOUSE
13
ARTICLE INFORMATION STORAGE DRIVE UNIT
7
DETECTING MEANS
DETECTION OF SCREW LOOSING TORQUE
82
TREATMENT FACILITY CONTROL MEANS
5
TREATMENT FACILITY CONTROL INFORMATION OUTPUT MEANS
52
TREATMENT PROCEDURE TRANSMITTING UNIT
51
DISPLAY UNIT
53
VOICE TRANSMITTING UNIT
54
INFORMATION OUTPUT PRINTER
55
4
TREATMENT PROCEDURE ALTERING MEANS
TREATMENT PROCEDURE DECIDING/GENERATING PROGRAM ALTERING UNIT
TREATMENT PROCEDURE DECIDING/GENERATING PROGRAM STORAGE UNIT
TREATMENT PROCEDURE DECISION/GENERATION UNIT
TREATMENT PROCEDURE DECISION MEANS
31
ARTICLE SPECIFICATIONS INFORMATION DATABASE
32
STATUTORY REGULATIONS/STANDARDS INFORMATIONS DATABASE
33
HARMFUL/HAZARDOUS MATERIAL/SUBSTANCE DATABASE
34
TREATMENT-ENTRUSTED FACTORY SPECIFICATIONS INFORMATION DATABASE
35
MARKET INFORMATION DATABASE
37
TREATMENT RESULT INFORMATION ACCUMULATING UNIT
STORAGE MEANS
3

FIG. 29

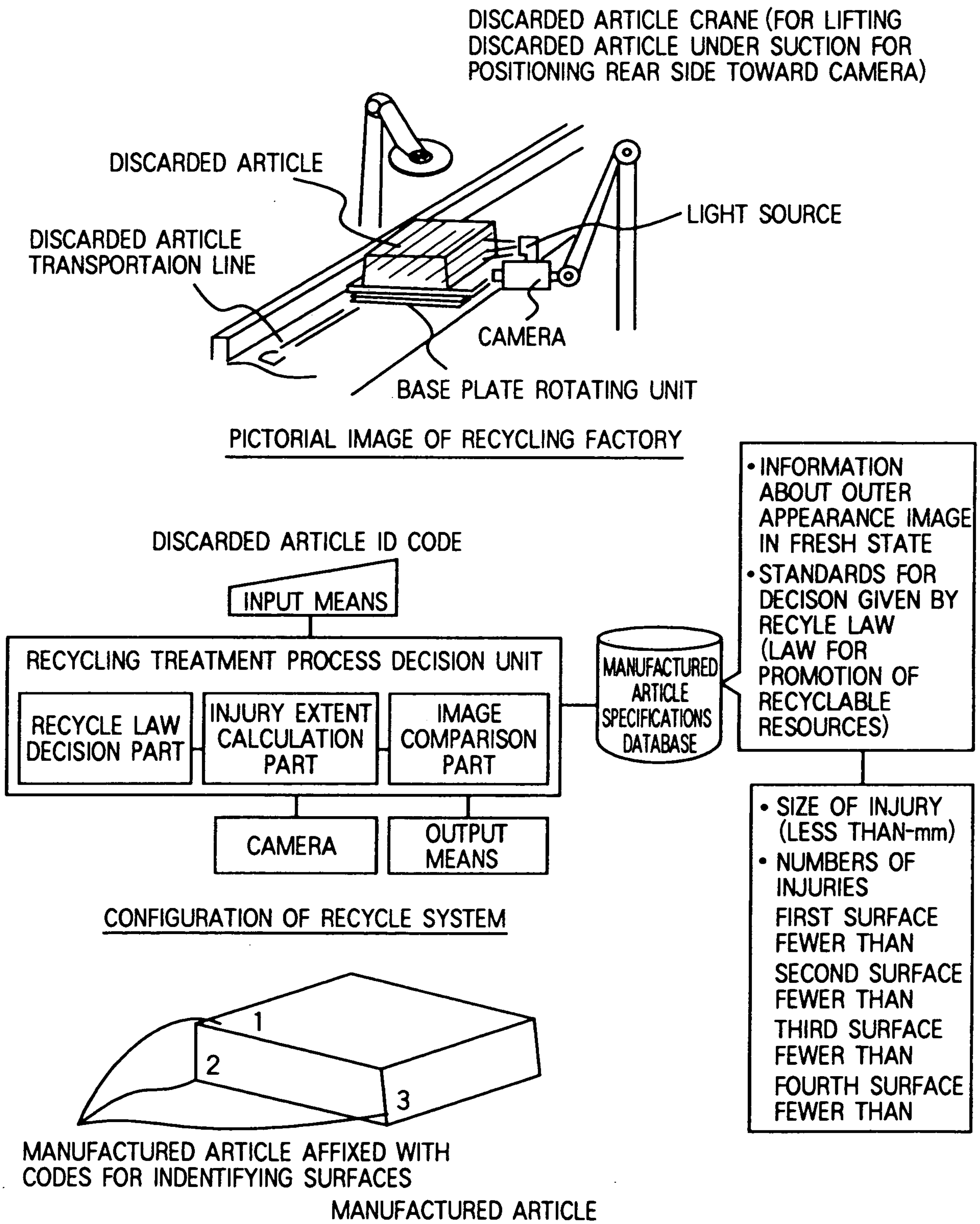

DISCARDED ARTICLE CRANE (FOR LIFTING DISCARDED ARTICLE UNDER SUCTION FOR POSITIONING REAR SIDE TOWARD CAMERA)
DISCARDED ARTICLE
LIGHT SOURCE
DISCARDED ARTICLE TRANSPORTAION LINE
CAMERA
BASE PLATE ROTATING UNIT
PICTORIAL IMAGE OF RECYCLING FACTORY
DISCARDED ARTICLE ID CODE
INPUT MEANS
RECYCLING TREATMENT PROCESS DECISION UNIT
RECYCLE LAW DECISION PART
INJURY EXTENT CALCULATION PART
IMAGE COMPARISON PART
MANUFACTURED ARTICLE SPECIFICATIONS DATABASE
• INFORMATION ABOUT OUTER APPEARANCE IMAGE IN FRESH STATE
• STANDARDS FOR DECISON GIVEN BY RECYLE LAW (LAW FOR PROMOTION OF RECYCLABLE RESOURCES)
CAMERA
OUTPUT MEANS
• SIZE OF INJURY (LESS THAN-mm)
• NUMBERS OF INJURIES
FIRST SURFACE FEWER THAN
SECOND SURFACE FEWER THAN
THIRD SURFACE FEWER THAN
FOURTH SURFACE FEWER THAN
CONFIGURATION OF RECYCLE SYSTEM
1
2
3
MANUFACTURED ARTICLE AFFIXED WITH CODES FOR INDENTIFYING SURFACES
MANUFACTURED ARTICLE

FIG. 30

NO	PART NAMES	PART CODE	SEPARATING PROCEDURE	
			DISASSEMBLING (WITHOUT DESTROYING MANUFACTURED ARTICLE)	DISINTEGRATION (ALLOWING DESTRUCTION)
1	BOX-LIKE HOUSING	32786	SCREWS NOS.5,6,7 (⊕CROSS-HEAD SCREW-DRIVER)/COVER↑/PRINTED CIRCUIT BOARD ASSEMBLY↑S	——
2	COVER	21937	SCREWS NOS.5,6,7 (⊕CROSS-HEAD SCREW-DRIVER)/COVER↑	——
3	PRINTED CIRCUIT BOARD ASSEMBLY	45789	SCREWS NOS.5,6,7 (⊕CROSS-HEAD SCREW-DRIVER)/COVER↑/PRINTED CIRCUIT BOARD ASSEMBLY↑SX2	MANUFACTURED ARTICLE (CUTTER/COVER↑/PRINTED CIRCUIT BOARD ASSEMBLY↑S)

DETACHING PROCEDURE \ FACILITY	SCREW-DRIVER	SHREDDER	CUTTER A	CUTTER B	
PATTERN A	○				
PATTERN B			○		
PATTERN C		○			

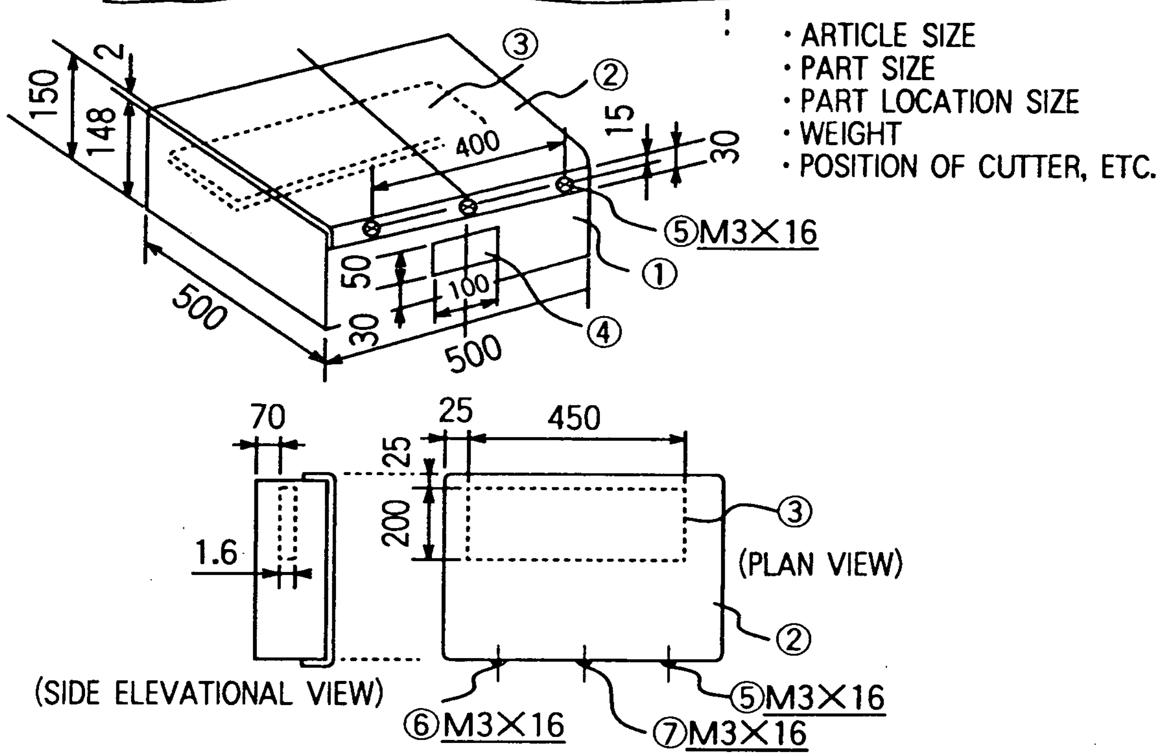
FIG. 31

(A FACILITIES INFORMATION)

1.SHREDDER		
NO	NAMES	TERATMENT-DESTINED OBJECT
1	ORDINARY SHREDDER	EXLUSIVE OF HARMFUL/ HAZARDOUS MATERIAL/ SUBSTANCE AND METAL BLOCKS
2	SHREDDER FOR MEEAL BLOCK	METAL BLOCKS
2.CUTTER		
NO	NAMES	TERATMENT-DESTINED OBJECT
1	CUTTER	EXCLUSIVE OF HARMFUL/ HAZARDOUS MATERIAL/ SUBSTANCE AND METAL BLOCKS

FIG. 32

NO	PART NAMES	PART SIZE	MATERIALS/ SUBSTANCES
1	BOX-LIKE HOUSING	32786	PS
2	COVER	21937	Al
3	PRINTED CIRCUIT BOARD ASSEMBLY	45789	Pb,Cu
4	RATING LABEL	11573	PAPER
5	M3×16SCREW	23578	Fe



NO	PART NAMES	PART CODES	DETACHING PROCEDURE: DISASSEMBLING (WITHOUT DESTROYING MANUFACTURED ARTICLE)	DETACHING PROCEDURE: DISINTGRATION (ALLOWING DESTRUCTION)
1	BOX-LIKE HOUSING	32786	SCREWS NOS.5,6,7 (⊕CROSS-HEAD SCREW-DRIVER)/COVER↑/PRINTED CIRCUIT BOARD ASSEMBLY↑S	——
2	COVER	21937	SCREWS NOS.5,6,7 (⊕CROSS-HEAD SCREW-DRIVER)/COVER↑	——
3	PRINTED CIRCUIT BOARD ASSEMBLY	45789	SCREWS NOS.5,6,7 (⊕CROSS-HEAD SCREW-DRIVER)/COVER↑ PRINTED CIRCUIT BOARD ASSEMBLY↑SX2	MANUFACTURED ARTICLE (CUTTER/COVER↑/ PRINTED CIRCUIT BOARD ASSEMBLY↑S)

FIG. 33

1.SHREDDER			
NO	NAMES	TERATMENT-DESTINED OBJECT	TREATABLE PART SIZE
1	ORDINARY SHREDDER	EXLUSIVE OF HARMFUL/ HAZARDOUS MATERIAL/ SUBSTANCE AND METAL BLOCKS	300X300X300 (mm)
2	SHREDDER FOR MEEAL BLOCK	METAL BLOCKS	300X300X300 (mm)
2.CUTTER			
NO	NAMES	TERATMENT-DESTINED OBJECT	TREATABLE PART SIZE
1	CUTTER	EXLUSIVE OF HARMFUL/ HAZARDOUS MATERIAL/ SUBSTANCE AND METAL BLOCKS	1000X1000X1000 (mm)

FIG. 34

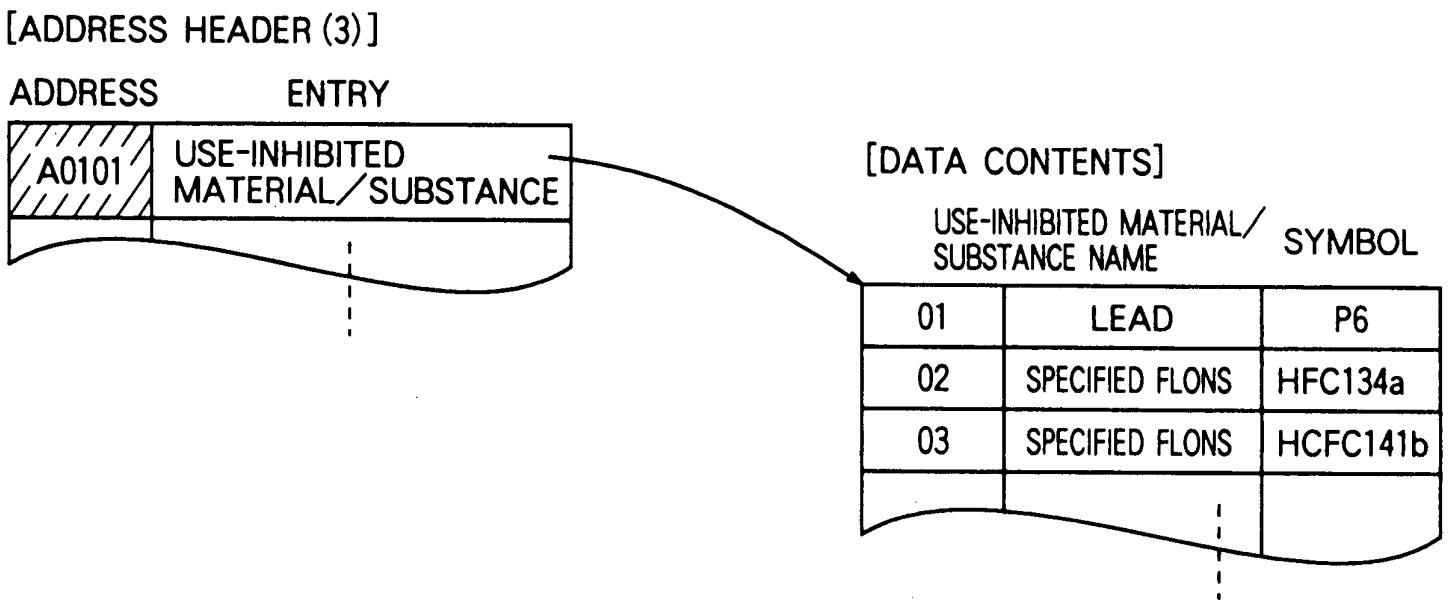


FIG. 35

1.SHREDDER	
NO	NAMES
1	ORDINARY SHREDDER
2	SHREDDER FOR METAL BLOCK
2.CUTTER	
NO	NAMES
1	CUTTER

FIG. 36

	SCREW-DRIVER	CUTTER	SHREDDER
SEPARATING PROCEDURE 1	○		○
SEPARATING PROCEDURE 2		○	○